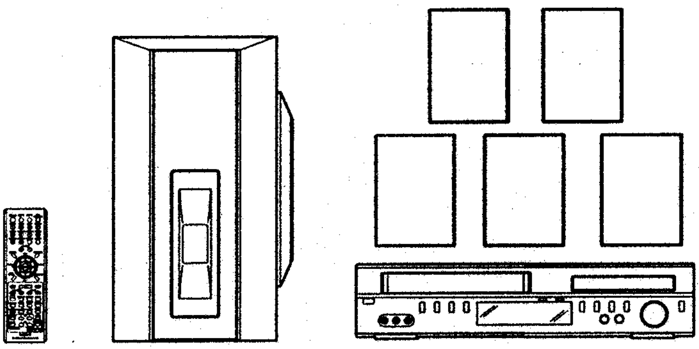
SANYO

FILE NO.

Service Manual

DVD & Hi-Fi VCR
Home Theater System

DC-TS3000(XE)



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PRODUCT CODE No.
129 673 04

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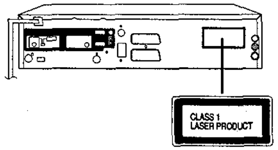
REFERENCE No. SM5810453

IMPORTANT WARNING

CAUTION:
DVD PLAYER IS A CLASS 1 LASER PRODUCT. HOWEVER THIS PLAYER USES A VISIBLE LASER BEAM WHICH COULD CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED. BE SURE TO OPERATE THE PLAYER CORRECTLY AS INSTRUCTED.

THE FOLLOWING CAUTION LABEL IS LOCATED ON THE REAR PANEL OF THE PLAYER.



(Printed on the Rear Panel)

WHEN THIS PLAYER IS PLUGGED TO THE WALL OUTLET, DO NOT PLACE YOUR EYES CLOSE TO THE OPENING OF THE DISC TRAY AND OTHER OPENINGS TO LOOK INTO THE INSIDE OF THIS PLAYER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

SERVICE NOTICE ON CHECKING

1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.
Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a ⚠ mark, the designated parts must be used.

3. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

4. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

1. MODEL NUMBER and VERSION LETTER
   The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.
2. PART NO. and DESCRIPTION
   You can find it in your SERVICE MANUAL.

DISASSEMBLY INSTRUCTION

1. REMOVAL OF MECHANICAL PARTS AND P.C. BOARDS

1-1: TOP CABINET AND FRONT CABINET (Refer to Fig. 1-1)

1. Remove the 5 screws ①.
2. Remove the Top Cabinet in the direction of arrow (A).
3. Disconnect the following connector: (CP651).
4. Unlock the 8 supports ②.
5. Remove the Front Cabinet in the direction of arrow (B).
6. Remove the 4 screws③.
7. Remove the Operation PCB in the direction of arrow (C).

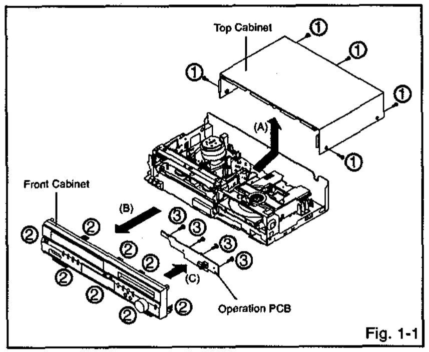


Fig. 1-1

1-2: FLAP (Refer to Fig. 1-2)

1. Open Flap to 90° and flex in direction of arrow (A), at the same time slide in direction of arrow (B).
2. Then lift in direction of arrow (C).

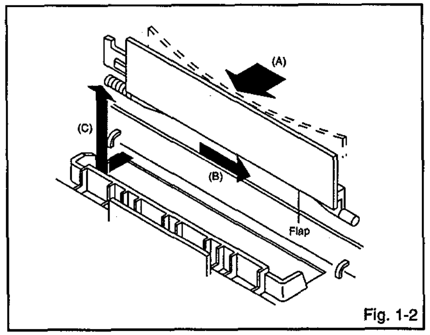


Fig. 1-2

1-3: DVD DECK (Refer to Fig. 1-3)

1. Make the short circuit on the position as shown **Fig. 1-3** using a soldering. If you remove the DVD Deck with no soldering, the Laser may be damaged.
2. Unlock the support ① and remove the Deck Top Holder in the direction of arrow (A).
3. Remove the 3 screws②.
4. Remove the screw③.
5. Disconnect the following connectors: (CP2601, CP2602, CP2603).
6. Remove the DVD Deck in the direction of arrow (B).
7. Remove the 3 screws④.
8. Remove the Front Angle in the direction of arrow (C).

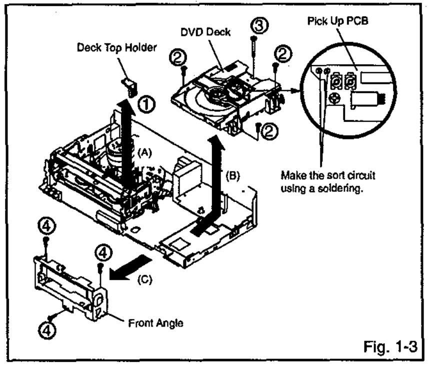


Fig. 1-3

NOTE

When the installation of the DVD Deck, remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD PCB connector.

1-4: POWER PCB (Refer to Fig. 1-4)

1. Remove the 3 scres①.
2. Disconnect the following connector; (CP1701)
3. Remove the Power PCB in the direction of srrow.
4. Remove the svrew②and remove the DVD Angle.

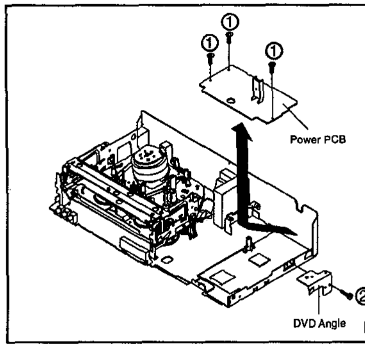


Fig. 1-4

1-5: DVD PCB (Refer to Fig. 1-5)

1. Remove the 3 screws ①.
2. Remove the screw ②.
3. Disconnect the following connectors: (CP4002, CP8101 and CP8102).
4. Remove the DVD PCB in the direction of arrow.

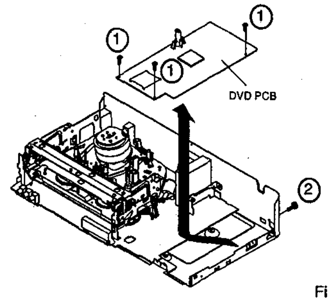

①
①
①
DVD PCB
②

Fig. 1-5

1-6: VCR DECK (Refer to Fig. 1-6)

NOTE

Do not remove the cable at the FE Head section. The FE Head may be damaged if you remove the cable by force.

1. Move the Cassette Holder Ass'y to the back side.
2. Remove the screw ①.
3. Remove the FE Head.
4. Remove the 3 screws ②.
5. Disconnect the following connectors: (CP101, CP102, and CP3001).
6. Remove the AC Head Cover and VCR Deck in the direction of arrow.

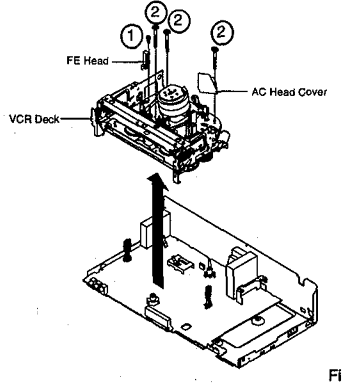

②
②
①
②
FE Head
AC Head Cover
VCR Deck

Fig. 1-6

1-7: VCR PCB (Refer to Fig. 1-7)

1. Remove the screw ① and remove the Fiber Washer.
2. Remove the 4 screws ②.
3. Remove the screw ③.
4. Remove the screw ④.
5. Remove the 3 Pin Shield.
6. Remove the VCR PCB in the direction of arrow.

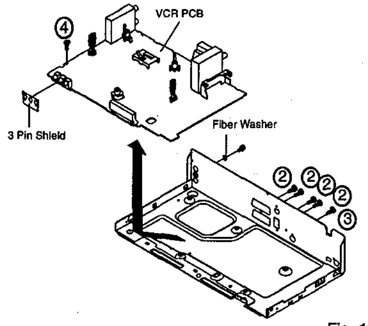

④
VCR PCB
3 Pin Shield
Fiber Washer
②
②
②
②
③

Fig. 1-7

2. REMOVAL OF VCR DECK PARTS

2-1: TOP BRACKET (Refer to Fig. 2-1)

1. Extend the 2 supports ①.
2. Slide the 2 supports ② and remove the Top Bracket.

NOTE

1. After the installation of the Top Bracket, bend the support ① so that the Top Bracket is fixed.

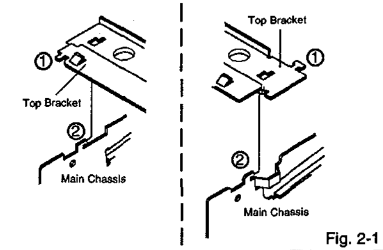

①
Top Bracket
②
Main Chassis
Top Bracket
①
②
Main Chassis

Fig. 2-1

2-2: CASSETTE HOLDER ASS'Y (Refer to Fig. 2-2)

1. Move the Cassette Holder Ass'y to the front side.
2. Push the Locker R to remove the Cassette Side R.
3. Remove the Cassette Side L.

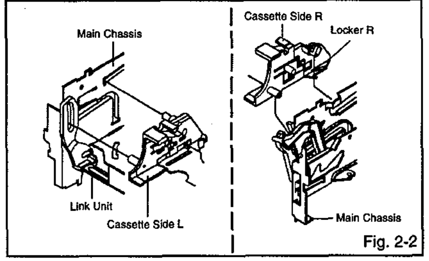

Main Chassis
Link Unit
Cassette Side L
Cassette Side R
Locker R
Main Chassis

Fig. 2-2

2-3: CASSETTE SIDE L/R (Refer to Fig. 2-3-A)

1. Remove the Locker Spring.
2. Unlock the 4 supports ① and then remove the Cassette Side L/R.
3. Unlock the support ② and then remove the Locker R.

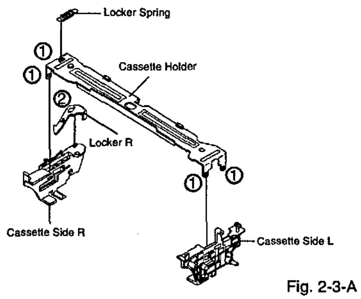

Locker Spring
①
①
Cassette Holder
②
Locker R
①
①
Cassette Side R
Cassette Side L

Fig. 2-3-A

NOTE

1. In case of the Locker R installation, check if the one position of Fig.2-3-B are correctly locked.
2. When you install the Cassette Side R, be sure to move the Locker R after installing.

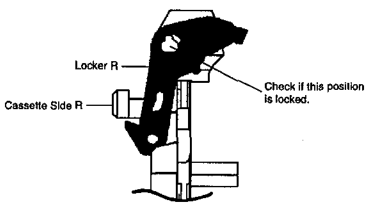

Locker R
Cassette Side R
Check if this position is locked.

Fig. 2-3-B

2-4: LINK UNIT (Refer to Fig. 2-4)

1. Set the Link Unit to the Eject position.
2. Unlock the support ①.
3. Remove the (A) side of the Link Unit first, then remove the (B) side.

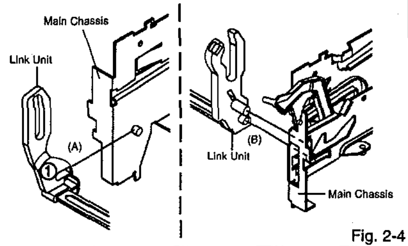

Main Chassis
Link Unit
(A)
①
(B)
Link Unit
Main Chassis

Fig. 2-4

2-5: LINK LEVER/FLAP LEVER (Refer to Fig. 2-5)

1. Extend the support ①.
2. Remove the Link Lever.
3. Remove the Flap Lever.

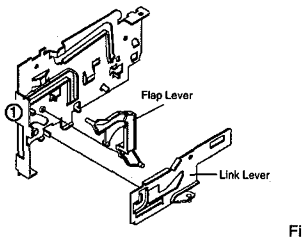
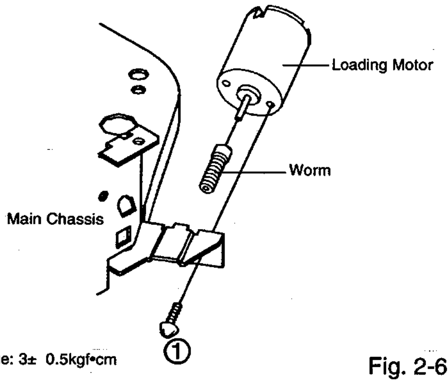

Flap Lever
①
Link Lever

Fig. 2-5

2-6: LOADING MOTOR/WORM (Refer to Fig. 2-6-A)

1. Remove the screw①.
2. Remove the Loading Motor.
3. Remove the Worm.


Loading Motor
Worm
Main Chassis
①

• Screw Torque: 3± 0.5kgf•cm

Fig. 2-6-A

NOTE

1. In case of the Worm installation, check if the value of the Fig. 2-6-B is correct.
2. In case of the Loading Motor installation, hook the wire on the Cassette Opener as shown Fig. 2-6-C.
3. When installing the wires between Capstan DD Unit and Loading Motor, connect them correctly as shown Fig. 2-6-D.

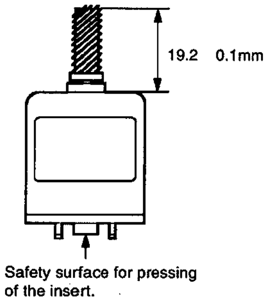

19.2 0.1mm
Safety surface for pressing
of the insert.

Fig. 2-6-B

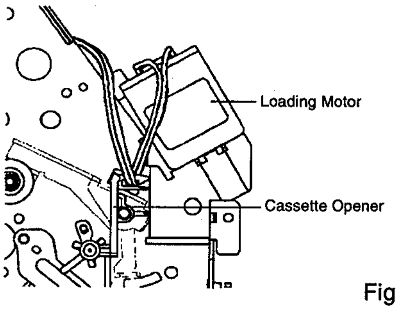

Loading Motor
Cassette Opener

Fig. 2-6-C

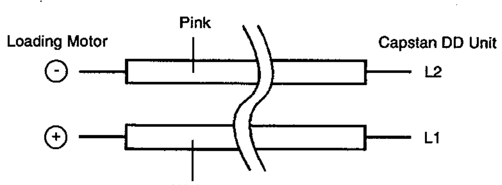

Loading Motor
Pink
Capstan DD Unit
⊖
L2
⊕
L1
White

Fig. 2-6-D

2-7: TENSION ASS'Y (Refer to Fig. 2-7-B)

1. Turn the Pinch Roller Cam clockwise so that the Tension Holder hook is set to the position of Fig. 2-7-A to move the Tension Arm Ass'y.
2. Remove the Tension Spring.
3. Unlock the 2 supports ①and remove the Tension Band.
4. Unlock the support ②and remove the Tension Arm Ass'y.
5. Unlock the support ③and remove the Tension Connect.
6. Float the hook④ and turn it clockwise then remove the Tension Holder.

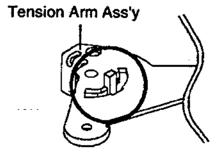

Tension Arm Ass'y

Fig. 2-7-A

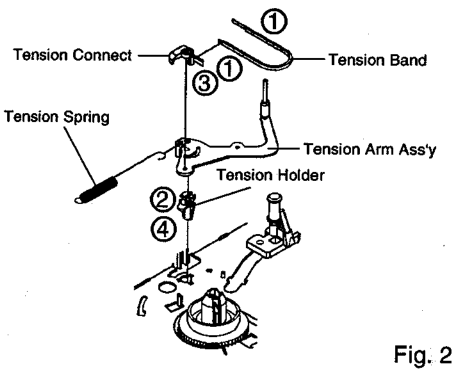

①
Tension Connect
③①
Tension Band
Tension Spring
Tension Arm Ass'y
Tension Holder
②
④

Fig. 2-7-B

NOTE

1. In case of the Tension Band installation, note the direction of the installation. **(Refer to Fig. 2-7-C)**
2. In case of the Tension Band installation, install correctly as Fig. 2-7-D.
3. In case of the Tension Connect installation, install as the circled section of Fig. 2-7-E.

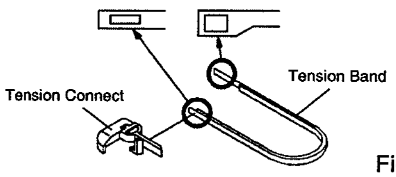

Tension Connect
Tension Band

Fig. 2-7-C

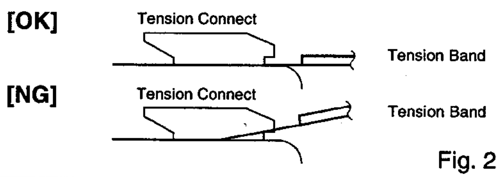

[OK]
Tension Connect
Tension Band
[NG]
Tension Connect
Tension Band

Fig. 2-7-D

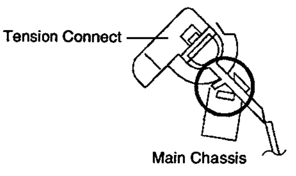

Tension Connect
Main Chassis

Fig. 2-7-E

2-8: T BRAKE ARM/T BRAKE BAND (Refer to Fig. 2-8-A)

1. Remove the T Brake Spring.
2. Turn the T Brake Arm clockwise and bend the hook section to remove it.
3. Unlock the 2 supports ① and remove the T Brake Band.

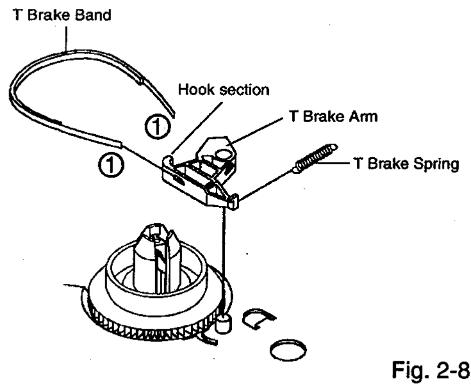

T Brake Band
Hook section
T Brake Arm
①
①
T Brake Spring

Fig. 2-8-A

NOTE

1. In case of the T Brake Band installation, install correctly as Fig. 2-8-B.

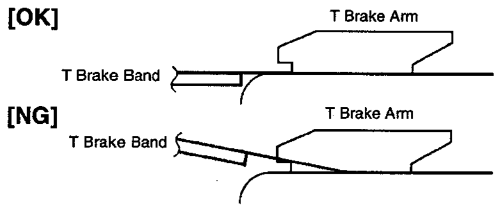

[OK]
T Brake Arm
T Brake Band
[NG]
T Brake Arm
T Brake Band

Fig. 2-8-B

2-9: S REEL/T REEL/IDLER ARM ASS'Y/IDLER GEAR (Refer to Fig. 2-9-A)

1. Remove the S Reel and T Reel.
2. Remove the 2 Polyslider Washers①.
3. Remove the Idler Arm Ass'y and Idler Gear.

NOTE

1. Take care not to damage the gears of the S Reel and T Reel.
2. The Polyslider Washer may be remained on the back of the reel.
3. Take care not to damage the shaft.
4. Do not touch the section "A" of S Reel and T Reel. (Use gloves.) **(Refer to Fig. 2-9-A)** Do not adhere the stains on it.
5. When you install the reel, clean the shaft and grease it (FG-84M). (If you do not grease, noise may be heard in FF/REW mode.)
6. After installing the reel, adjust the height of the reel. **(Refer to MECHANICAL ADJUSTMENT)**

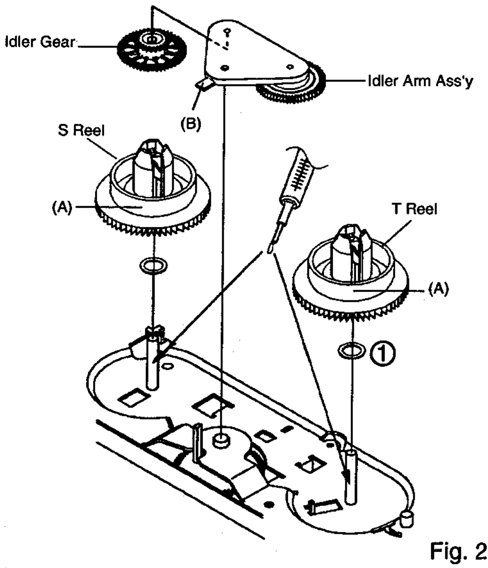

Idler Gear
Idler Arm Ass'y
S Reel
(B)
(A)
T Reel
(A)
①

Fig. 2-9-A

NOTE

1. In case of the S Reel and T Reel installation, check if the correct parts are installed. **(Refer to Fig. 2-9-B)**
2. In case of the Idler Arm Ass'y installation, install correctly as Fig. 2-9-C. And also set it so that the section "B" of Fig. 2-9-A is placed under the Main Chassis tab.

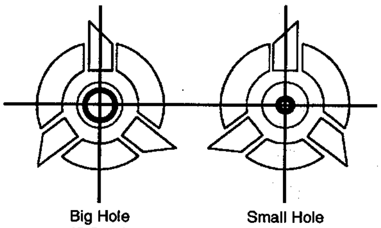

Big Hole
(S Reel)
Small Hole
(T Reel)

Fig. 2-9-B

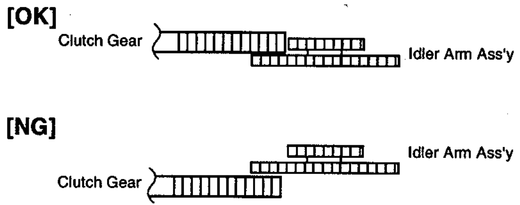

[OK]
Clutch Gear
Idler Arm Ass'y
[NG]
Idler Arm Ass'y
Clutch Gear

Fig. 2-9-C

2-8: T BRAKE ARM/T BRAKE BAND (Refer to Fig. 2-8-A)

1. Remove the T Brake Spring.
2. Turn the T Brake Arm clockwise and bend the hook section to remove it.
3. Unlock the 2 supports ① and remove the T Brake Band.

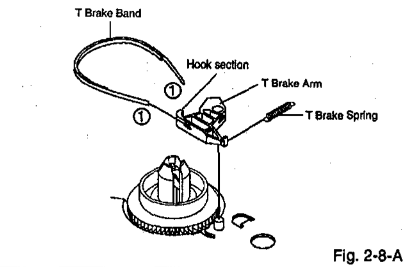

T Brake Band
Hook section
①
T Brake Arm
①
T Brake Spring

Fig. 2-8-A

NOTE

1. In case of the T Brake Band installation, install correctly as Fig. 2-8-B.

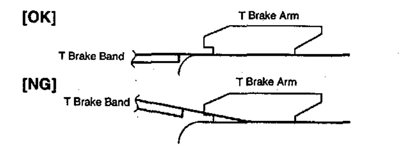

[OK]
T Brake Arm
T Brake Band
[NG]
T Brake Arm
T Brake Band

Fig. 2-8-B

2-9: S REEL/T REEL/IDLER ARM ASS'Y/IDLER GEAR (Refer to Fig. 2-9-A)

1. Remove the S Reel and T Reel.
2. Remove the 2 Polyslider Washers①.
3. Remove the Idler Arm Ass'y and Idler Gear.

NOTE

1. Take care not to damage the gears of the S Reel and T Reel.
2. The Polyslider Washer may be remained on the back of the reel.
3. Take care not to damage the shaft.
4. Do not touch the section "A" of S Reel and T Reel. (Use gloves.) **(Refer to Fig. 2-9-A)** Do not adhere the stains on it.
5. When you install the reel, clean the shaft and grease it (FG-84M). (If you do not grease, noise may be heard in FF/REW mode.)
6. After installing the reel, adjust the height of the reel. **(Refer to MECHANICAL ADJUSTMENT)**

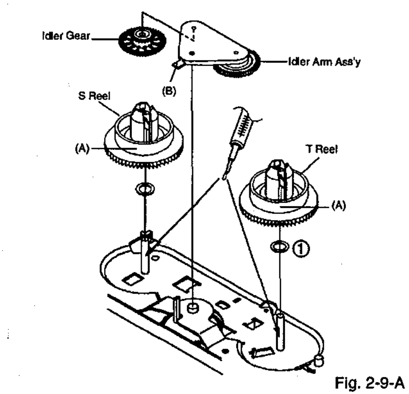

Idler Gear
Idler Arm Ass'y
(B)
S Reel
(A)
T Reel
(A)
①
①

Fig. 2-9-A

NOTE

1. In case of the S Reel and T Reel installation, check if the correct parts are installed. **(Refer to Fig. 2-9-B)**
2. In case of the Idler Arm Ass'y installation, install correctly as Fig. 2-9-C. And also set it so that the section "B" of Fig. 2-9-A is placed under the Main Chassis tab.

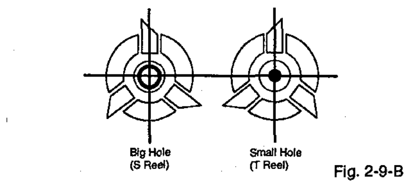

Big Hole
(S Reel)
Small Hole
(T Reel)

Fig. 2-9-B

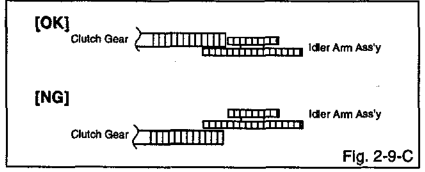

[OK]
Clutch Gear
Idler Arm Ass'y
[NG]
Idler Arm Ass'y
Clutch Gear

Fig. 2-9-C

2-10: CASSETTE OPENER/PINCH ROLLER BLOCK/ P5 ARM ASS'Y (Refer to Fig. 2-10-A)

1. Unlock the support ① and remove the Cassette Opener.
2. Remove the Pinch Roller Block and P5 Arm Ass'y.

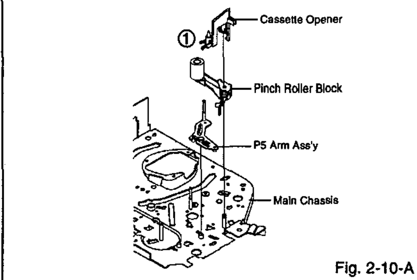

①
Cassette Opener
Pinch Roller Block
P5 Arm Ass'y
Main Chassis

Fig. 2-10-A

NOTE

1. Do not touch the Pinch Roller. (Use gloves.)
2. In case of the Pinch Roller Block and the Pinch Roller Cam installation, install correctly as Fig. 2-10-B.

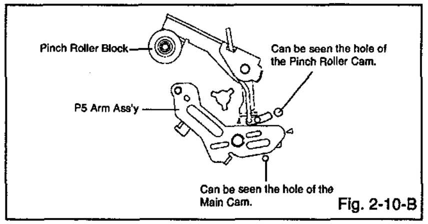

Pinch Roller Block
Can be seen the hole of the Pinch Roller Cam.
P5 Arm Ass'y
Can be seen the hole of the Main Cam.

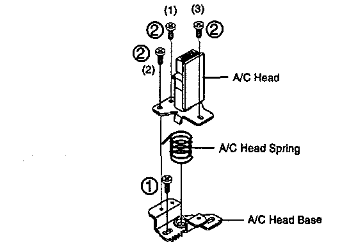
Fig. 2-10-B

2-11: A/C HEAD (Refer to Fig. 2-11-A)

1. Remove the screw①.
2. Remove the A/C Head Base.
3. Remove the 3 screws②.
4. Remove the A/C Head and A/C Head Spring.

NOTE

1. Do not touch the A/C Head. (Use gloves.)
2. When you install the A/C Head Spring, install as shown in Fig. 2-11-B.
3. When you install the A/C Head, tighten the screw (1) first, then tighten the screw (2), finally tighten the screw (3).


(1)
(3)
②
②
②
(2)
A/C Head
A/C Head Spring
①
A/C Head Base

• Screw Torque: 5 ± 0.5kgf•cm (Screw ①)

Fig. 2-11-A

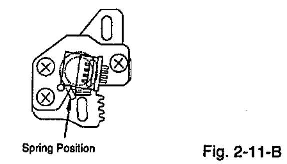
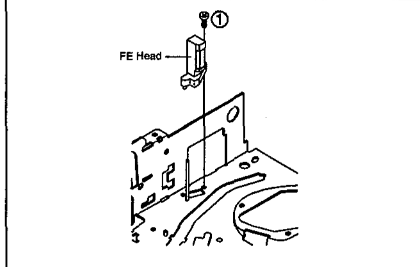

Spring Position

Fig. 2-11-B

2-12: FE HEAD (RECORDER ONLY) (Refer to Fig. 2-12)

1. Remove the screw①.
2. Remove the FE Head.



• Screw Torque: 5 ± 0.5kgf•cm
• The FE Head is not installed on the Video Cassette Player.

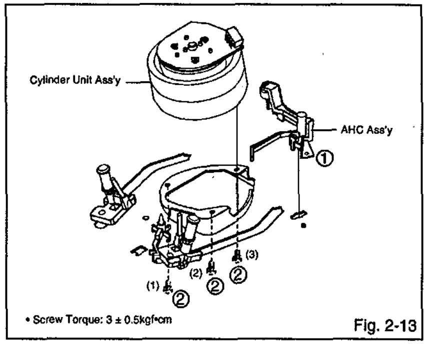
Fig. 2-12

2-13: AHC ASS'Y/CYLINDER UNIT ASS'Y (Refer to Fig. 2-13)

1. Unlock the support ①and remove the AHC Ass'y.
2. Disconnect the following connector: (CD2001)
3. Remove the 3 screws②.
4. Remove the Cylinder Unit Ass'y.

NOTE

1. When you install the Cylinder Unit Ass'y, tighten the screws from (1) to (3) in order while pulling the Ass'y toward the left front direction.

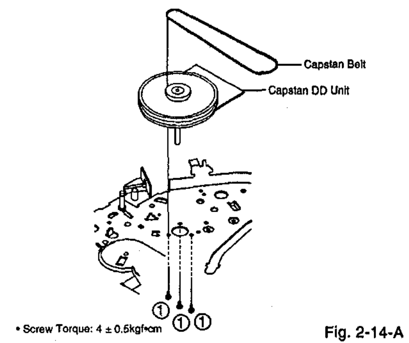

Cylinder Unit Ass'y
AHC Ass'y
①
(3)
(2)
②
②
(1)
②

• Screw Torque: 3 ± 0.5kgf•cm

Fig. 2-13

2-14: CAPSTAN DD UNIT (Refer to Fig. 2-14-A)

1. Remove the Capstan Belt.
2. Remove the 3 screws①.
3. Remove the Capstan DD Unit.


Capstan Belt
Capstan DD Unit
①
① ①

• Screw Torque: 4 ± 0.5kgf•cm

Fig. 2-14-A

NOTE

1. In case of the Capstan DD Unit installation, apply the silicon bond (TSE3843-W) on the position Fig. 2-14-B correctly. (If no silicon bond applied, abnormal noise will be heard on the deck operation.) **(Refer to Fig. 2-14-B, C)**

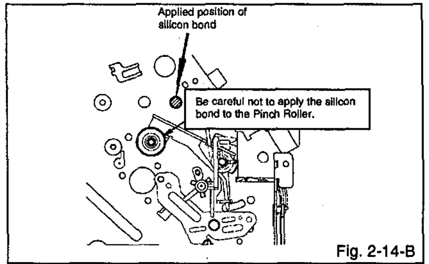

Applied position of silicon bond
Be careful not to apply the silicon bond to the Pinch Roller.

Fig. 2-14-B

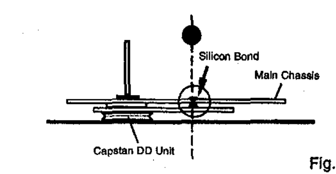

Silicon Bond
Main Chassis
Capstan DD Unit

Fig. 2-14-C

2-15: MAIN CAM/PINCH ROLLER CAM/JOINT GEAR (Refer to Fig. 2-15-A)

1. Remove the E-Ring①, then remove the Main Cam.
2. Remove the E-Ring②, then remove the Pinch Roller Cam and Joint Gear.

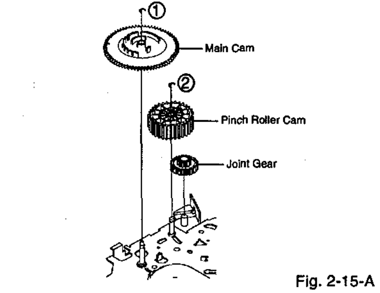

①
Main Cam
②
Pinch Roller Cam
Joint Gear

Fig. 2-15-A

NOTE

1. In case of the Pinch Roller Cam and Main Cam installation, install them as the circled section of Fig. 2-15-B so that the each markers are met. **(Refer to Fig. 2-15-B)**

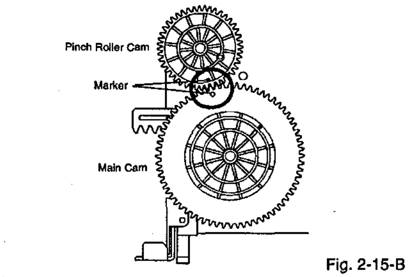

Pinch Roller Cam
Marker
Main Cam

Fig. 2-15-B

2-16: LOADING GEAR S/T UNIT (Refer to Fig. 2-16-A)

1. Remove the E-Ring ① and remove the Main Loading Gear.
2. Remove the Main Rod, Tension Lever, Loading Arm S Unit and Loading Arm T Unit.

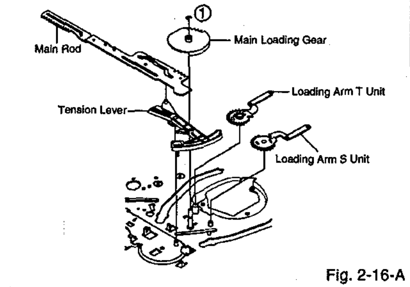

①
Main Loading Gear
Main Rod
Tension Lever
Loading Arm T Unit
Loading Arm S Unit

Fig. 2-16-A

NOTE

1. When you install the Loading Arm S Unit, Loading Arm T Unit and Main Loading Gear, align each marker. **(Refer to Fig. 2-16-B)**

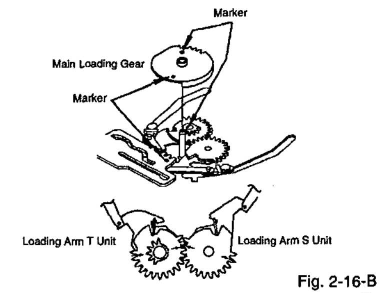

Marker
Main Loading Gear
Marker
Loading Arm T Unit
Loading Arm S Unit

Fig. 2-16-B

2-17: CLUTCH ASS'Y/RING SPRING/CLUTCH LEVER/ CLUTCH GEAR (Refer to Fig. 2-17-A)

1. Remove the Polyslider Washer①.
2. Remove the Clutch Ass'y and Ring Spring.
3. Remove the Clutch Lever.
4. Remove the Coupling Gear, Coupling Spring and Clutch Gear.

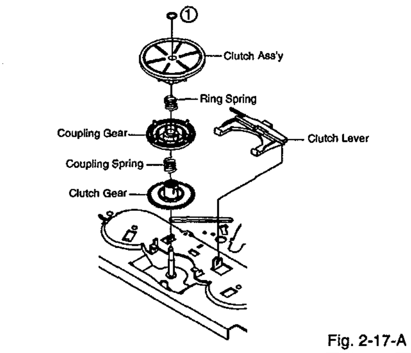

①
Clutch Ass'y
Ring Spring
Coupling Gear
Clutch Lever
Coupling Spring
Clutch Gear

Fig. 2-17-A

NOTE

1. In case of the Clutch Ass'y installation, install it with inserting the spring of the Clutch Ass'y into the dent of the Coupling Gear. **(Refer to Fig. 2-17-B)**

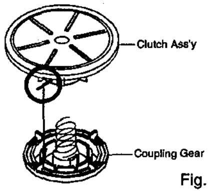
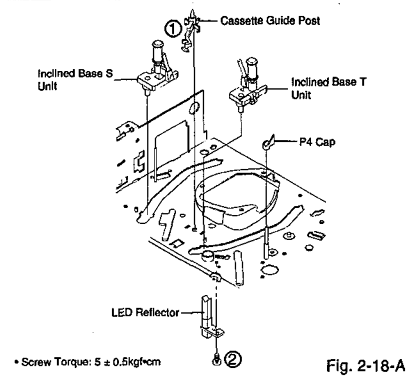

Clutch Ass'y
Coupling Gear

Fig. 2-17-B

2-18: CASSETTE GUIDE POST/INCLINED BASE S/T UNIT/P4 CAP/LED REFLECTOR (Refer to Fig. 2-18-A)

1. Remove the P4 Cap.
2. Unlock the support ① and remove the Cassette Guide Post.
3. Remove the Inclined Base S/T Unit.
4. Remove the screw②.
5. Remove the LED Reflector.


①
Cassette Guide Post
Inclined Base S Unit
Inclined Base T Unit
P4 Cap
LED Reflector
②

• Screw Torque: 5 ± 0.5kgf•cm

Fig. 2-18-A

NOTE

1. Do not touch the roller of Guide Roller.
2. In case of the P4 Cap installation, install it with parallel for "A" and "B" of Fig. 2-18-B.
3. In case of the Cassette Guide Post installation, install correctly as the circled section of Fig. 2-18-C.

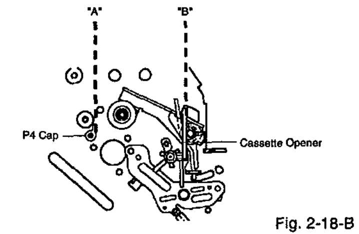

"A"
"B"
P4 Cap
Cassette Opener

Fig. 2-18-B

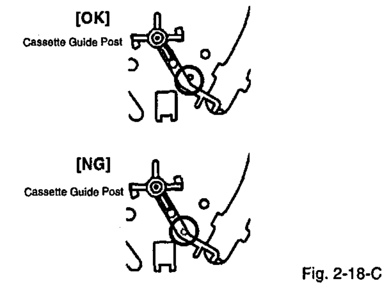

[OK]
Cassette Guide Post
[NG]
Cassette Guide Post

Fig. 2-18-C

3. REMOVAL OF DVD DECK PARTS

NOTE

1. Do not disassemble the DVD DECK PARTS except listed parts here. Minute adjustments are needed if the disassemble is done. If the repair is needed except listed parts, replace the DVD MECHA ASS'Y.

3-1: TRAY (Refer to Fig. 3-1-A)

1. Set the Tray opened. **(Refer to the DISC REMOVAL METHOD AT NO POWER SUPPLY)**
2. Unlock the support ① and remove the Tray.

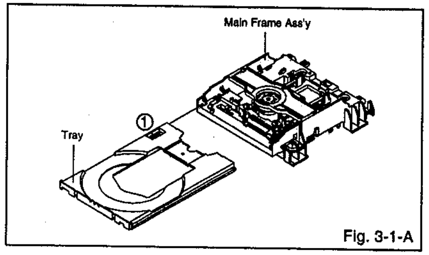

Main Frame Ass'y
Tray
①

Fig. 3-1-A

NOTE

1. In case of the Tray installation, install them as the circled section of Fig. 3-1-B so that the each markers are met.

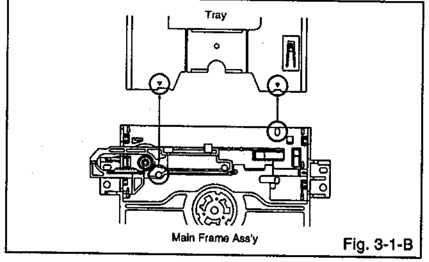

Tray
Main Frame Ass'y

Fig. 3-1-B

3-2: MAIN CHASSIS ASS'Y (Refer to Fig. 3-2-A)

1. Remove the Main Chassis Ass'y from the Insulator (R).
2. Unlock the support ①.
3. Remove the Main Chassis Ass'y.

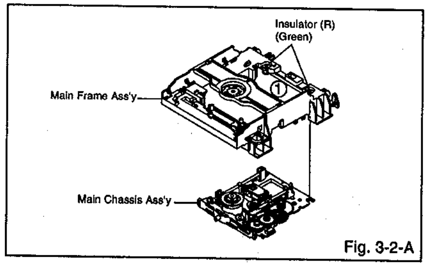

Insulator (R)
(Green)
Main Frame Ass'y
①
Main Chassis Ass'y

Fig. 3-2-A

NOTE

1. In case of the Main Chassis Ass'y, install it from (1) to (6) in order. **(Refer to Fig. 3-2-B)**

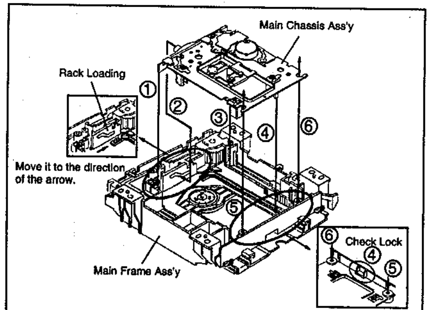

Main Chassis Ass'y
Rack Loading
①
②
③
④
⑤
⑥
Move it to the direction of the arrow.
Main Frame Ass'y
⑥
Check Lock
④
⑤

Fig. 3-2-B

3-3: RACK LOADING/MAIN GEAR/ RACK LOADING SPRING (Refer to Fig. 3-3)

1. Remove the Rack L Spring.
2. Press down the catcher ① and slide the Rack Loading.
3. Remove the Rack Loading, Rack Loading Spring and Main Gear.

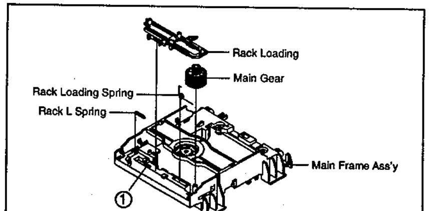

Rack Loading
Main Gear
Rack Loading Spring
Rack L Spring
Main Frame Ass'y
①

Fig. 3-3

3-4: CLAMPER ASS'Y/INSULATOR(R)/LEVER SWITCH (Refer to Fig. 3-4-A)

1. Remove the screw ①.
2. Remove the Lever Switch.
3. Remove the 2 Insulator (R).
4. Press the Clamper and rotate the Clamper Plate clockwise, then unlock the 3 supports ②.
5. Remove the Clamper Plate, Clamper Magnet and Clamper.

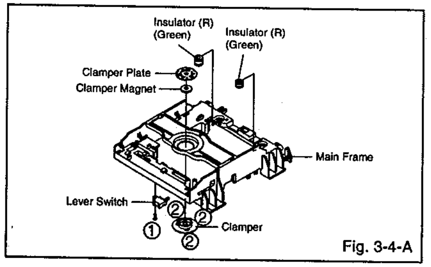

Insulator (R)
(Green)
Insulator (R)
(Green)
Clamper Plate
Clamper Magnet
Main Frame
Lever Switch
①
②
②
②
Clamper

Fig. 3-4-A

NOTE

1. When installing the Clamper Magnet, install it with the green face up.
2. When installing the wire of the Lever Switch, install it correctly as Fig. 3-4-B.
3. When installing the Lever Switch, install it correctly as Fig. 3-4-C.
4. In case of the Lever Switch installation, hook the wire on the Main Frame as shown Fig. 3-4-D.

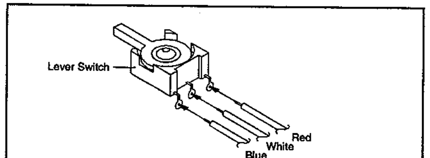

Lever Switch
Red
White
Blue
From DVD PCB

Fig. 3-4-B

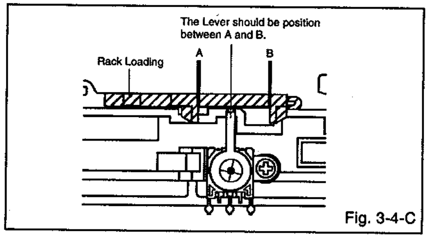

The Lever should be position between A and B.
Rack Loading
A
B

Fig. 3-4-C

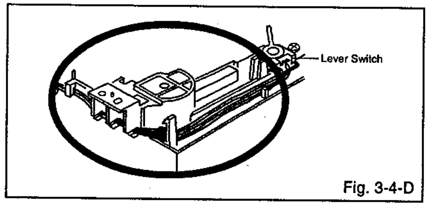

Lever Switch

Fig. 3-4-D

3-5: TRAVERSE HOLDER/INSULATOR (F) (Refer to Fig. 3-5-A)

1. Remove the Traverse Holder.
2. Remove the 2 Insulator (F).

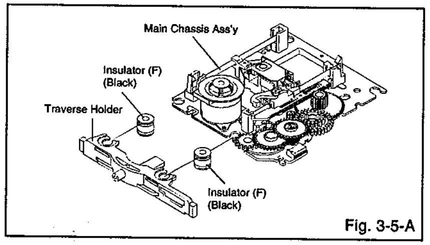

Main Chassis Ass'y
Insulator (F)
(Black)
Traverse Holder
Insulator (F)
(Black)

Fig. 3-5-A

NOTE

1. After the installing of the Traverse Holder, check if the wire is like Fig. 3-5-B.

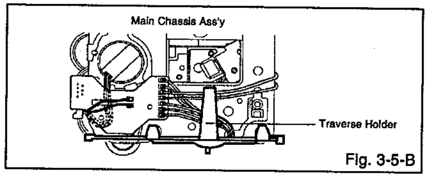
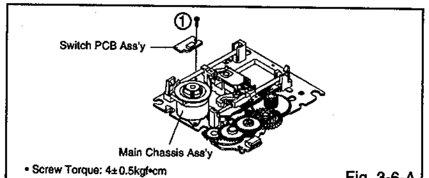

Main Chassis Ass'y
Traverse Holder

Fig. 3-5-B

3-6: SWITCH PCB ASS'Y (Refer to Fig. 3-6-A)

1. Remove the screw ①.
2. Remove the Switch PCB Ass'y.


①
Switch PCB Ass'y
Main Chassis Ass'y

• Screw Torque: 4±0.5kgf•cm

Fig. 3-6-A

NOTE

1. When installing the wire of the Switch PCB, install it correctly as Fig. 3-6-B.
2. When installing the wire of the Switch PCB, while pressing it in the direction of the arrow as shown Fig. 3-6-B, then instal it.

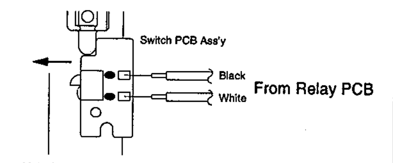
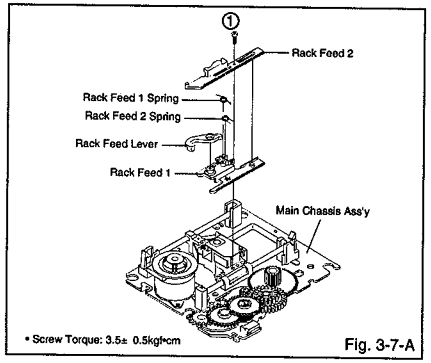

Switch PCB Ass'y
Black
White
From Relay PCB
Main Chassis Ass'y

Fig. 3-6-B

3-7: RACK FEED ASS'Y (Refer to Fig. 3-7-A)

1. Remove the screw ①.
2. Remove the Rack Feed 1/2 Spring, Rack Feed 1/2 and Rack Feed Lever.


①
Rack Feed 2
Rack Feed 1 Spring
Rack Feed 2 Spring
Rack Feed Lever
Rack Feed 1
Main Chassis Ass'y

• Screw Torque: 3.5± 0.5kgf•cm

Fig. 3-7-A

NOTE

1. After the assembly of the Rack Feed, check if the Rack Feed 1/2 is moving smoothly. **(Refer to Fig. 3-7-B)**
2. In case of the Rack Feed Ass'y installation, install correctly as Fig. 3-7-C.

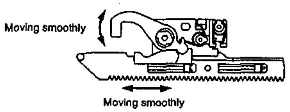

Moving smoothly
Moving smoothly

Fig. 3-7-B

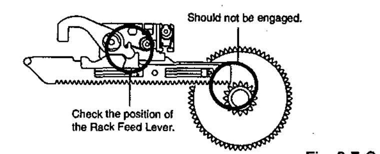

Should not be engaged.
Check the position of the Rack Feed Lever.

Fig. 3-7-C

3-8: RELAY PCB ASS'Y (Refer to Fig. 3-8-A)

1. Remove the screw①.
2. Remove the Relay PCB Ass'y.

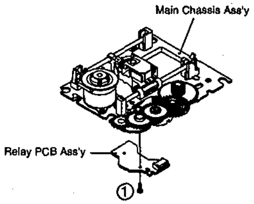

Main Chassis Ass'y
Relay PCB Ass'y
①

Fig. 3-8-A

NOTE

1. When installing the wire of the Relay PCB, install it correctly as Fig. 3-8-B.

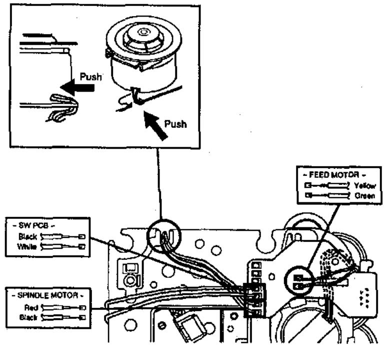

Push
Push
- SW PCB -
Black
White
- SPINDLE MOTOR -
Red
Black
- FEED MOTOR -
Yellow
Green

Fig. 3-8-B

3-9: GEAR (Refer to Fig. 3-9-A)

1. Unlock the support①.
2. Remove the Middle Gear 1/2/3, Idler Gear and Feed Gear.

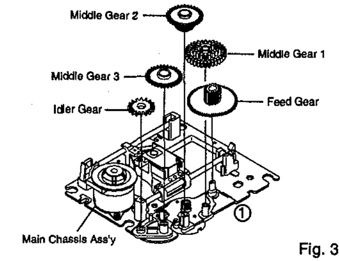

Middle Gear 2
Middle Gear 1
Middle Gear 3
Idler Gear
Feed Gear
①
Main Chassis Ass'y

Fig. 3-9-A

NOTE

1. In case of the Idler Gear installation, install correctly as Fig. 3-9-B.
2. When installing the Middle Gear 2, check if the Middle Gear 2 is locked correctly as Fig. 3-9-C.

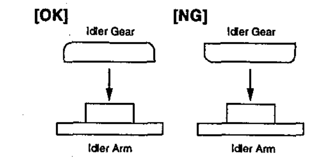

[OK]
Idler Gear
Idler Arm
[NG]
Idler Gear
Idler Arm

Fig. 3-9-B

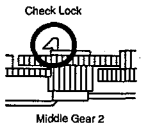

Check Lock
Middle Gear 2

Fig. 3-9-C

3-10: IDLER ARM (Refer to Fig. 3-10-A)

1. Remove the Idler Arm Spring.
2. Remove the Chassis Spring.
3. Remove the Idler Arm.

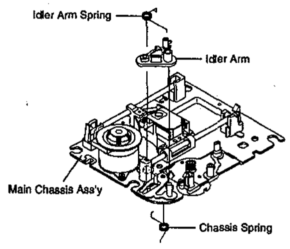

Idler Arm Spring
Idler Arm
Main Chassis Ass'y
Chassis Spring

Fig. 3-10-A

NOTE

1. In case of the Idler Arm installation, install as the circled section of Fig. 3-10-B.
2. In case of the Idler Arm Spring installation, install as the circled section of Fig. 3-10-C.
3. In case of the Chassis Spring installation, install as the circled section of Fig. 3-10-D.

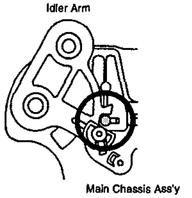

Idler Arm
Main Chassis Ass'y

Fig. 3-10-B

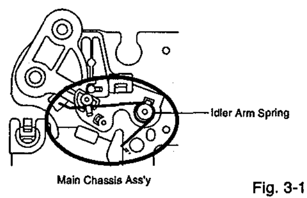

Idler Arm Spring
Main Chassis Ass'y

Fig. 3-10-C

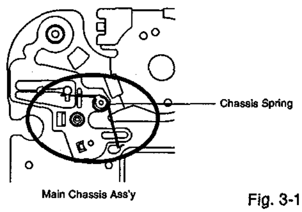
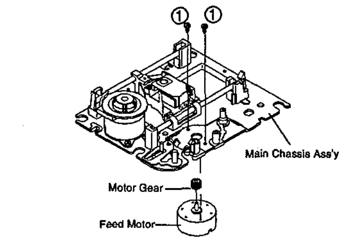

Chassis Spring
Main Chassis Ass'y

Fig. 3-10-D

3-11: FEED MOTOR (Refer to Fig. 3-11-A)

1. Remove the 2 screws①.
2. Remove the Feed Motor.
3. Remove the Motor Gear.


①
①
Main Chassis Ass'y
Motor Gear
Feed Motor

• Screw Torque: 1 ± 0.5kgf•cm

Fig. 3-11-A

NOTE

1. In case of the Motor Gear installation, check if the value of the Fig. 3-11-B is correct.
2. When installing the Feed Motor, check if the cable is positioned as Fig. 3-11-C.

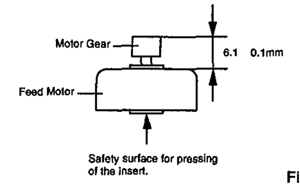

Motor Gear
Feed Motor
6.1 0.1mm
Safety surface for pressing of the insert.

Fig. 3-11-B

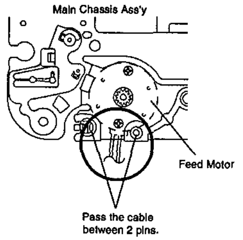

Main Chassis Ass'y
Feed Motor
Pass the cable between 2 pins.

Fig. 3-11-C

1. CONFIRMATION AND ADJUSTMENT

Read the following NOTES before starting work.

- Place an object which weighs between 450g~500g on the Cassette Tape to keep it steady when you want to make the tape run without the Cassette Holder. (Do not place an object which weighs over 500g.)

1-1: CONFIRMATION AND ADJUSTMENT OF REEL DISK HEIGHT

1. Turn on the power and set to the STOP mode.
2. Set the master plane **(JG022)** and reel disk height adjustment jig **(JG024A)** on the mechanism framework, taking care not to scratch the drum, as shown in **Fig. 1-1-A**.
3. While turning the reel and confirm the following points. Check if the surface "A" of reel disk is lower than the surface "B" of reel disk height adjustment jig **(JG024A)** and is higher than the surface "C". If it is not passed, place the height adjustment washers and adjust to 10(+2, -0)mm.
4. Adjust the other reel in the same way.

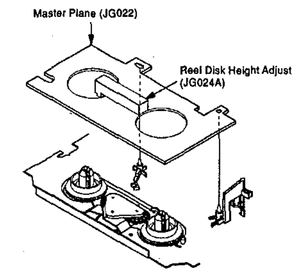

Master Plane (JG022)
Reel Disk Height Adjustment Jig (JG024A)

Fig. 1-1-A

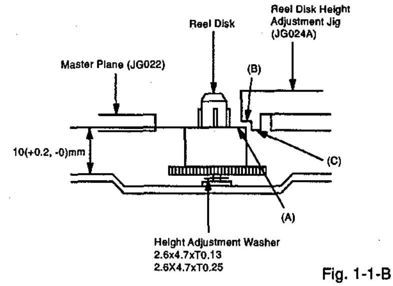

Reel Disk
Reel Disk Height Adjustment Jig (JG024A)
Master Plane (JG022)
(B)
10(+0.2, -0)mm
(C)
(A)
Height Adjustment Washer
2.6x4.7xT0.13
2.6X4.7xT0.25

Fig. 1-1-B

1-2: CONFIRMATION AND ADJUSTMENT OF TENSION POST POSITION

1. Set to the PLAY mode.
2. Adjust the adjusting section for the Tension Arm position so that the Tension Arm top is within the standard line of Main Chassis.
3. While turning the S Reel clockwise, confirm that the edge of the Tension Arm is located in the position described above.

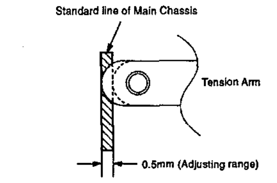

Standard line of Main Chassis
Tension Arm
0.5mm (Adjusting range)

Fig. 1-2-A

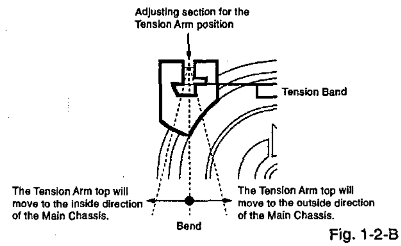

Adjusting section for the Tension Arm position
Tension Band
The Tension Arm top will move to the inside direction of the Main Chassis.
The Tension Arm top will move to the outside direction of the Main Chassis.
Bend

Fig. 1-2-B

1-3: CONFIRMATION OF PLAYBACK TORQUE AND BACK TENSION TORQUE DURING PLAYBACK

1. Load a video tape (E-180) recorded in standard speed mode. Set the unit to the PLAY mode.
2. Install the tentelometer as shown in **Fig. 1-3**. Confirm that the meter indicates 20 2gf in the beginning of playback.

- USING A CASSETTE TYPE TORQUE TAPE **(JG100A)**

1. After confirmation and adjustment of Tension Post position **(Refer to item 1-2)**, load the cassette type torque tape **(JG100A)** and set to the PLAY mode.
2. Confirm that the right meter of the torque tape indicates 50~90gf•cm during playback in SP mode.
3. Confirm that the left meter of the torque tape indicates 25~40gf•cm during playback in SP mode.

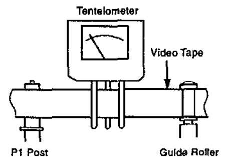

Tentelometer
Video Tape
P1 Post
Guide Roller

Fig. 1-3

1-4: CONFIRMATION OF VSR TORQUE

1. Install the Torque Gauge **(JG002F)** and Adapter **(JG002B)** on the S Reel. Set to the Picture Search (Rewind) mode. **(Refer to Fig.1-4-B)**
2. Then, confirm that it indicates 120~180gf•cm.

NOTE

Install the Torque Gauge on the reel disk firmly. Press the REW button to turn the reel disk.

1-5: CONFIRMATION OF REEL BRAKE TORQUE

(S Reel Brake) **(Refer to Fig. 1-4-B)**

1. Once set to the Fast Forward mode then set to the Stop mode. While, unplug the AC cord when the Pinch Roller Block is on the position of **Fig. 1-4-A**.
2. Move the Idler Ass'y from the S Reel.
3. Install the Torque Gauge **(JG002F)** and Adapter **(JG002B)** on the S Reel. Turn the Torque Gauge **(JG002F)** clockwise.
4. Then, confirm that it indicates 60~100gf•cm.

(T Reel Brake) **(Refer to Fig. 1-4-B)**

1. Once set to the Fast Forward mode then set to the Stop mode. While, unplug the AC cord when the Pinch Roller Block is on the position of **Fig. 1-4-A**.
2. Move the Idler Ass'y from the T Reel.
3. Install the Torque Gauge **(JG002E)** and Adapter **(JG002B)** on the T reel. Turn the Torque Gauge **(JG002E)** counterclockwise.
4. Then, confirm that it indicates 30~50gf•cm.

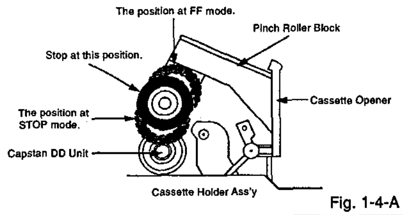

The position at FF mode.
Pinch Roller Block
Stop at this position.
Cassette Opener
The position at STOP mode.
Capstan DD Unit
Cassette Holder Ass'y

Fig. 1-4-A

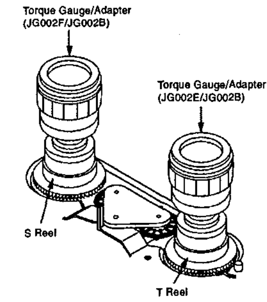

Torque Gauge/Adapter (JG002F/JG002B)
Torque Gauge/Adapter (JG002E/JG002B)
S Reel
T Reel

Fig. 1-4-B

NOTE

If the torque is out of the range, replace the following parts.

Check item	Replacement Part
1-4	Idler Ass'y/Clutch Ass'y
1-5	S Reel side: S Reel/Tension Band/Tension Connect/Tension Arm Ass'y T Reel side: T Reel/T Brake Band//T Brake Spring/T Brake Arm

2. CONFIRMATION AND ADJUSTMENT OF TAPE RUNNING MECHANISM

Tape Running Mechanism is adjusted precisely at the factory. Adjustment is not necessary as usual. When you replace the parts of the tape running mechanism because of long term usage or failure, the confirmation and adjustment are necessary.

2-1: GUIDE ROLLER

1. Playback the VHS Alignment Tape **(JG001C or JG001E)**. **(Refer to SERVICING FIXTURE AND TOOLS)**
2. Connect CH-1 of the oscilloscope to **TP103 (Envelope)** and CH-2 to **TP102 (SW Pulse)**.
3. Trigger with SW Pulse and observe the envelope. **(Refer to Fig. 2-1-A)**
4. When observing the envelope, adjust the Adjusting Driver **(JG005)** slightly until the envelope will be flat. Even if you press the Tracking Button, adjust so that flatness is not moved so much.
5. Adjust so that the A : B ratio is better than 3 : 2 as shown in **Fig. 2-1-B**, even if you press the Tracking Button to move the envelope (The envelope waveform will begin to decrease when you press the Tracking Button).
6. Adjust the PG shifter during playback. **(Refer to the ELECTRICAL ADJUSTMENTS)**

NOTE

After adjustment, confirm and adjust A/C head. **(Refer to item 2-2)**

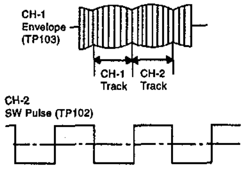

CH-1 Envelope (TP103)
CH-1 Track
CH-2 Track
CH-2 SW Pulse (TP102)

Fig. 2-1-A

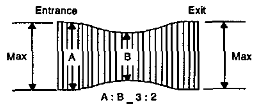

Entrance
Exit
Max
A
B
Max
A : B _ 3 : 2

Fig. 2-1-B

2-2: CONFIRMATION AND ADJUSTMENT OF AUDIO/ CONTROL HEAD

When the Tape Running Mechanism does not work well, adjust the following items.

1. Playback the VHS Alignment Tape **(JG001C or JG001E)**. **(Refer to SERVICING FIXTURE AND TOOLS)**
2. Confirm that the reflected picture of stamp mark is appeared on the tape prior to P4 Post as shown in **Fig. 2-2-A.**
   a) When the reflected picture is distorted, turn the screw ① clockwise until the distortion is disappeared.
   b) When the reflected picture is not distorted, turn the screw① counterclockwise until little distortion is appeared, then adjust the a).
3. Turn the screw ②to set the audio level to maximum.
4. Confirm that the bottom of the Audio/ Control Head and the bottom of the tape is shown in **Fig. 2-2-C.**
   c) When the height is not correct, turn the screw③to adjust the height. Then, adjust the 1~3 again.

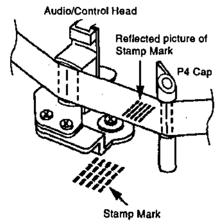


Fig. 2-2-A

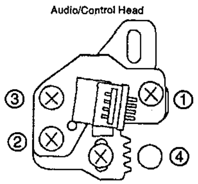


Fig. 2-2-B

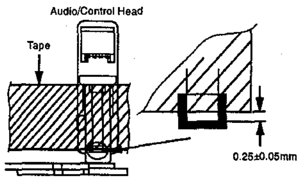


Fig. 2-2-C

2-3: TAPE RUNNING ADJUSTMENT (X VALUE ADJUSTMENT)

1. Confirm and adjust the height of the Reel Disk. **(Refer to Item 1-1)**
2. Confirm and adjust the position of the Tension Post. **(Refer to Item 1-2)**
3. Adjust the Guide Roller. **(Refer to Item 2-1)**
4. Confirm and adjust the Audio/Control Head. **(Refer to Item 2-2)**
5. Connect CH-1 of the oscilloscope to **TP102**, CH-2 to **TP103** and CH-3 to **pin 19 of J8004.**
6. Playback the VHS Alignment Tape **(JG001U or JG001V)**. **(Refer to SERVICING FIXTURE AND TOOLS)**
7. Set the X Value adjustment driver **(JG153)** to the④of **Fig. 2-2-B**. Adjust X value so that the envelope waveform output becomes maximum. Check if the relation between Audio and Envelope waveform becomes (1) or (2) of **Fig. 2-3.**

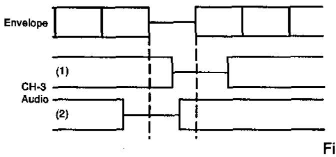
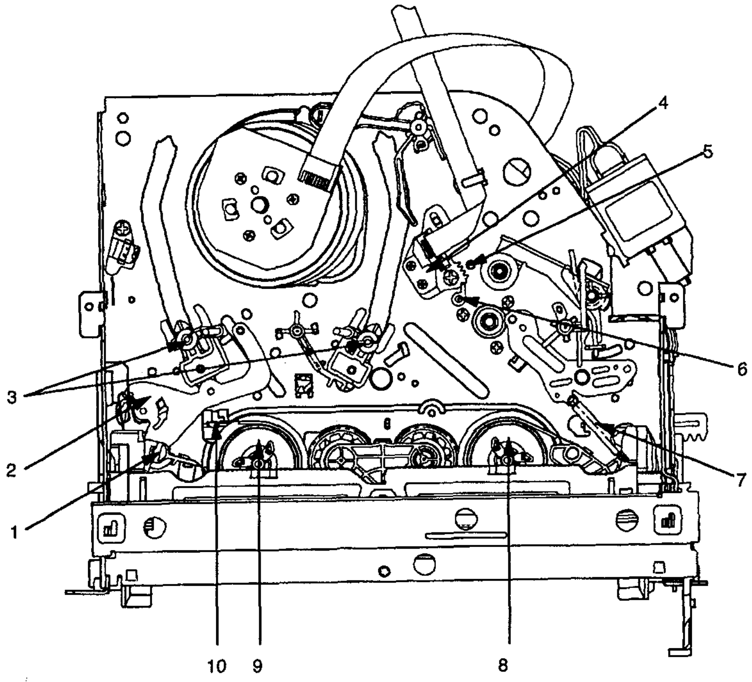


Fig. 2-3

2-4: CONFIRM HI-FI AUDIO (HI-FI model only)

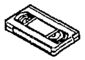
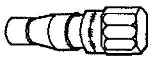
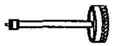
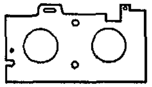
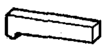
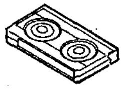
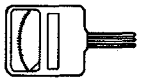
1. Connect CH-1 of the oscilloscope to **TP103** and CH-2 to the **pin 19 of J8004.**
2. Playback the VHS Alignment Tape **(JG001R)**. **(Refer to SERVICING FIXTURE AND TOOLS)**
3. Press the Tracking Up button and count number of steps which the audio output is changed from Hi-Fi (10KHz) to MONO (6KHz).
4. Press the Tracking Down button and count number of steps which the audio output is changed from Hi-Fi (10KHz) to MONO (6KHz).
5. If the difference are more than 3 steps, set the X Value adjustment driver **(JG153)** to④of **Fig. 2-2-B**. Change the X Value and adjust it so that the value becomes within 2 steps.

3. MECHANISM ADJUSTMENT PARTS LOCATION GUIDE



1. Tension Connect
2. Tension Arm
3. Guide Roller
4. Audio/Control Head
5. X value adjustment driver hole
6. P4 Post
7. T Brake Spring
8. T Reel
9. S Reel
10. Adjusting section for the Tension Arm position

SERVICING FIXTURES AND TOOLS

(For 2 head 1 speed model, 4 head model) VHS Alignment Tape JG001E (VP$_1$S-LI6^3) JG001F (VP$_1$S-CO1^3) JG001R (VP$_1$S-LI6^{3}H) JG001U (VP$_1$S-X6^3) 	**(For 2 head 2 speed model)** VHS Alignment Tape JG001C (VP$_2$S-LI6^3) JG001D (VP$_2$S-CO1^3) JG001V (VP$_2$S-X6^3) 	JG002B Adapter JG002E Dial Torque Gauge (10~90gf•cm) JG002F (60~600gf•cm) 	JG005 Post Adjustment Screwdriver Part No. SV-TG0-030-000 (small)
JG153 X Value Adjustment Screwdriver 	JG022 Master Plane 	JG024A Reel Disk Height Adjustment Jig 	JG100A Torque Tape (VHT-063) 
JG154 Cable 	JG176 Up-Date Disc 	Tentelometer 	

Ref. No.	Part No.	Parts Name	Remarks
JG001E	APJG001E00	VHS Alignment Tape	Monoscope, 6KHz **(For 2 head 1 speed model, 4 head model)**
JG001F	APJG001F00	VHS Alignment Tape	Color Bar, 1KHz **(For 2 head 1 speed model, 4 head model)**
JG001R	APJG001R00	VHS Alignment Tape	Hi-Fi Audio **(For Hi-Fi model)**
JG001U	APJG001U00	VHS Alignment Tape	X Value Adjustment **(For 2 head 1 speed model, 4 head model)**
JG001C	APJG001C00	VHS Alignment Tape	Monoscope, 6KHz **(For 2 head 2 speed model)**
JG001D	APJG001D00	VHS Alignment Tape	Color Bar, 1KHz **(For 2 head 2 speed model)**
JG001V	APJG001V00	VHS Alignment Tape	X Value Adjustment **(For 2 head 2 speed model)**
JG002B	APJG002B00	Adapter	VSR Torque, Brake Torque (S Reel/T Reel Ass'y)
JG002E	APJG002E00	Dial Torque Gauge (10~90gf•cm)	Brake Torque (T Reel Ass'y)
JG002F	APJG002F00	Dial Torque Gauge (60~600gf•cm)	VSR Torque, Brake Torque (S Reel)
JG005	APJG005000	Post Adjustment Screwdriver	Guide Roller Adjustment
JG153	APJG153000	X Value Adjustment Screwdriver	X Value Adjustment
JG022	APJG022000	Master Plane	Reel Disk Height Adjustment
JG024A	APJG024A00	Reel Disk Height Adjustment Jig	Reel Disk Height Adjustment
JG100A	APJG100A00	Torque Tape (VHT-063)	Playback Torque, Back Tension Torque During Playback
JG154	APJG154000	Cable	Used to connect the test point of SERVICE and GROUND
JG176	APJG176034	Up-Date Disc	Up-Date of the Firmware

PREPARATION FOR SERVICING

How to use the Servicing Fixture

1. While pressing the POWER button on the set for more than 2 seconds, press the CH DOWN button on the set simultaneously at the Power OFF. Although the DVD is connected, the DVD mode cannot be selected.
2. Short circuit between **TP3001** and **Ground** with the cable JG154.
   (The BOT, EOT, and the Reel Sensor do not work and the VCR deck can be operated without a cassette tape.)
3. In case of using a cassette tape, press the TAPE EJECT button to insert or eject a cassette tape.
   Turn on the power and re-check the cable before checking the trouble points.

When you servicing with connection of DVD, perform the operations above step 2 to step 3.

PREVENTIVE CHECKS AND SERVICE INTERVALS

The following standard table depends on environmental conditions and usage.
Parts replacing time does not mean the life span for individual parts.
Also, long term storage or misuse may cause transformation and aging of rubber parts.
The following list means standard hours, so the checking hours depends on the conditions.

Time / Parts Name	500 hours	1,000 hours	1,500 hours	2,000 hours	2,500 hours	Notes
Audio Control Head	■	■	■	●	●	Clean those parts in contact with the tape.
Full Erase Head (Recorder only)	■	■	■	●	●	
Capstan Belt		●	●	●	●	Clean the rubber, and parts which the rubber touches.
Pinch Roller	■	●	●	●	●	
Capstan DD Unit		●	●	●	●	
Loading Motor					●	
Tension Band		●	●	●	●	
T Brake Band		●	●	●	●	
Clutch Ass'y		●	●	●	●	
Idler Arm Ass'y		●	●	●	●	
Capstan Shaft	■	■	■	■	■	
Tape Running Guide Post	■	■	■	■	■	Replace when rolling becomes abnormal.
Cylinder Unit	■	●	●	●	●	Clean the Head

■ : Clean
● : Check it and if necessary, replace it.

CONFIRMATION OF HOURS USED

PLAY/REC total hours can be checked on the screen.
Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".

1. Connect the set to TV Monitor.
2. Turn on the POWER.
3. Press both CH UP button on the set and the FF button on the set for more than 2 seconds.
   The **Fig. 1** screen will appear on TV Monitor.
4. After the confirmation of using hours, turn off the power.

```
INIT  0C6  06
PLAY/REC  0010
```

INIT 0C6 06 — Initial setting content of MEMORY IC.
PLAY/REC 0010 — PLAY/REC total hours.
= (16 x 16 x 16 x thousands digit value)
+ (16 x 16 x hundreds digit value)
+ (16 x tens digit value)
+ (ones digit value)

Fig. 1

PREVENTIVE CHECKS AND SERVICE INTERVALS

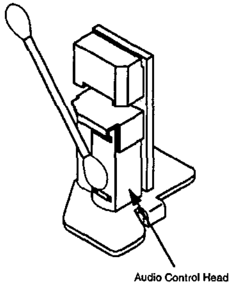
CLEANING

NOTE

After cleaning the heads with isopropyl alcohol, do not run a tape until the heads dry completely. If the heads are not completely dry and alcohol gets on the tape, damage may occur.

1. AUDIO CONTROL HEAD

Clean the Audio Control Head with the cotton stick soaked by alcohol. Clean the full erase head in the same manner. **(Refer to the figure below.)**



2. TAPE RUNNING SYSTEM

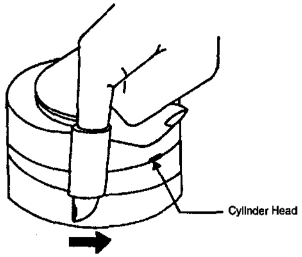
When cleaning the tape transport system, use the gauze moistened with isopropyl alcohol.

3. CYLINDER

Wrap a piece of chamois around your finger. Dip it in isopropyl alcohol. Hold it to the cylinder head softly. Turn the cylinder head counterclockwise to clean it (in the direction of the arrow). **(Refer to the figure below.)**

NOTE

Do not exert force against the cylinder head. Do not move the chamois upward or downward on the head.
Use the chamois one by one.



SERVICE MODE LIST

This unit provided with the following SERVICE MODES so you can repair, examine and adjust easily.
To enter to the SERVICE MODE function, press and hold both buttons simultaneously on the main unit or on the main unit and on the remote control for more than a standard time (second).

Set Key	Set Key	Standard Time (seconds)	Operations
CH UP	FF	2	PLAY/REC total hours are displayed on the TV Monitor. Refer to the "PREVENTIVE CHECKS AND SERVICE INTERVALS" (CONFIRMATION OF HOURS USED). Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
CH UP	STOP	2	Adjust the PG SHIFTER automatically. Refer to the "ELECTRICAL ADJUSTMENT" (PG SHIFTER).
CH UP	PLAY	2	Initialization of the factory on VCR. NOTE: Do not use this for the normal servicing. If you set a factory initialization, the memories are reset such as the clock setting, the channel setting, and PLAY/REC total hours.
CH DOWN	POWER	2	VCR operation mode at no connection of DVD. Refer to the "PREPARATION FOR SERVICING" NOTE: Although the DVD is connected, the DVD mode cannot be selected.

Set Key	Remocon Key	Standard Time (seconds)	Operations
REC	4	2	Initialization of the factory on DVD. NOTE: Do not use this for the normal servicing. The function will only work without the setting of DVD disc at DVD mode. While pressing the Remocon Key for more than the Standard Time, press the Set Key simultaneously.
REC	6	2	DVD Write mode. Refer to the "RE-WRITE FOR DVD FIRMWARE". NOTE: Do not use this for the normal servicing. The function will only work at the DVD stop mode.
STOP	1	3	Check for the firmware version. Refer to the "RE-WRITE FOR DVD FIRMWARE". NOTE: Do not use this for the normal servicing. The function will only work at the DVD stop mode.
STOP	7	3	Releasing of PARENTAL LOCK. Refer to the "PARENTAL CONTROL - RATING LEVEL". NOTE: The function will only work without the setting of DVD disc at DVD mode.

Method	Operations
Make the short circuit between the test point of SERVICE and the GND.	The BOT, EOT, and the Reel Sensor do not work and the VCR deck can be operated without a cassette tape. Refer to the "PREPARATION FOR SERVICING"

WHEN REPLACING EEPROM(MEMORY)IC

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to TABLE 1.

Note: No need setting due to the adjustment value except the list below.

INIT	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
0B0	---	---	---	---	---	---	---	---	---	1D	07	AD	20	00	02	38
0C0	44	18	00	99	9F	05	10	B7	89	AD	AD	96	93	88	00	00
0D0	00	89	42	30	60	56	65	5F	80	97	2C	FA	5F	00	00	00
0E0	00	00	00	00	00	00	00	00	00	00	00	5F	00	97	2C	FA
0F0	5F	CD	C8	02	21	55	80	3D	68	08	89	3A	99	---	---	---
100	06	06	D9	00	99	01	D9	00	99	01	03	00	66	F2	00	00

Table 1

1. Connect the set to TV Monitor.
2. Turn on the POWER.
3. Press both CH UP button on the set and the FF button on the set for more than 2 seconds.
   ADDRESS and DATA will appear on TV Monitor as **Fig 1**.

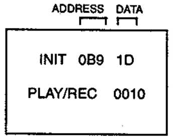


Fig. 1

4. ADDRESS is now selected and should "blink". Using the Tracking + or - button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
5. Press ENTER to select DATA. When DATA is selected, it will "blink".
6. Again, step through the DATA using Tracking + or - button until required DATA value has been selected.
7. Pressing ENTER will take you back to ADDRESS for further selection if necessary.
8. Repeat steps 4 to 7 until all data has been checked.
9. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

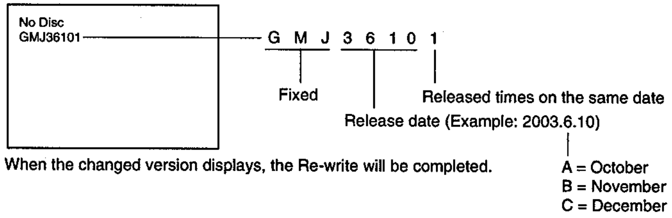
After the data input, set to the initializing of shipping.

10. Turn POWER on.
11. Press both CH UP button on the set and the PLAY button on the set for more than 2 seconds.
12. After the finishing of the initializing of shipping, the unit will turn off automatically.

The unit will now have the correct DATA for the new MEMORY IC.

RE-WRITE FOR DVD FORMWARE

1. Turn on the power, and set the DVD mode.
2. Confirm that the "No Disc" will be appeared on the screen.
3. Open the DVD tray.
4. Press both Channel button **(6)** on the remote control and the REC button on the set for more than 2 seconds.
5. Press OPEN/CLOSE button on the unit to check if all the keys on the unit do not function.
   NOTE: To check if DVD Write mode is set.
   Up-Date can be done at Non DVD Write mode. But the read error may occur.
6. Place the Up-Date Disc and close the tray by hand. **(Refer to SERVICING FIXTURE AND TOOLS)**
7. Automatic read will start and "Firmware upgrade" will be displayed on the screen.
8. Approxi. 60 seconds later, the tray will open automatically. Remove the Up-Date Disc.
9. Then, Approxi. 50 seconds later, the above indication will disappear and the tray will close automatically.
   When the "No Disc" appears on the screen, the write will end.
   NOTE: Do not turn off the unit on the way or push the tray by hand to close it.
   Up-Date error will happen and can not be done with the Up-Date of Up-Date Disc.
10. Unplug the AC cord, then plug it in.
11. **After the write, set to the initializing of shipping.**
    Set to the DVD mode, press both Channel button **(4)** on the remote control and the REC button on the set for more than 2 seconds.
    The "INITIALIZE 7 ---> COMPLETE" will appear on the screen.
12. Then unplug the AC cord, and plug it in.
13. **CHECK FOR THE FIRMWARE VERSION**
    Set to the DVD mode, press both Channel button **(1)** on the remote control and the STOP button on the set for more than 3 seconds.
    Firmware version will be displayed on the top left of the screen.
    When the changed version displays, the Re-write will be completed.
14. Turn off the power



When the changed version displays, the Re-write will be completed.

Read and perform this adjustment when repairing the circuits or replacing electrical parts or PCB assemblies.

1. BASIC ADJUSTMENT

CAUTION

- When you exchange IC and Transistor for a heat sink, apply the silicon grease **(YG6260M)** on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

1-1: PG SHIFTER

CONDITIONS

MODE-PLAYBACK
Input Signal-Alignment Tape **(JG001B)**

INSTRUCTIONS

1. Connect CH-1 on the oscilloscope to **TP102** and CH-2 to the **Pin 19 of J8004.**
2. Playback the alignment tape. **(JG001B)**
3. Press and hold the Tracking-Auto button on the remote control more than 2 seconds to set tracking to center.
4. Press both CH UP button on the set and the STOP button on the set for more than 2 seconds.

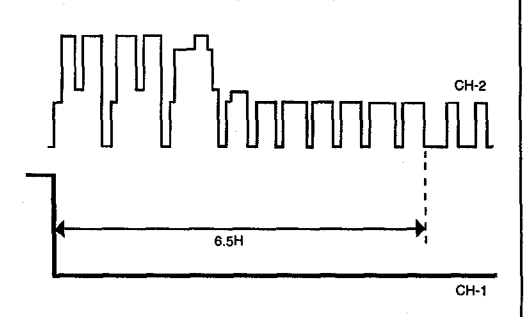


Fig. 1-1-A

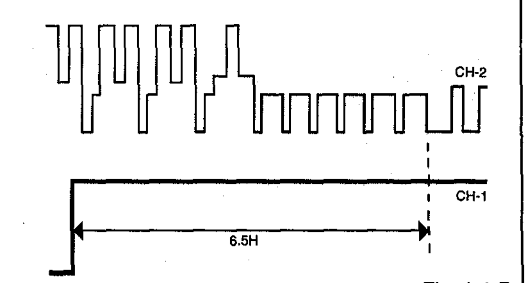
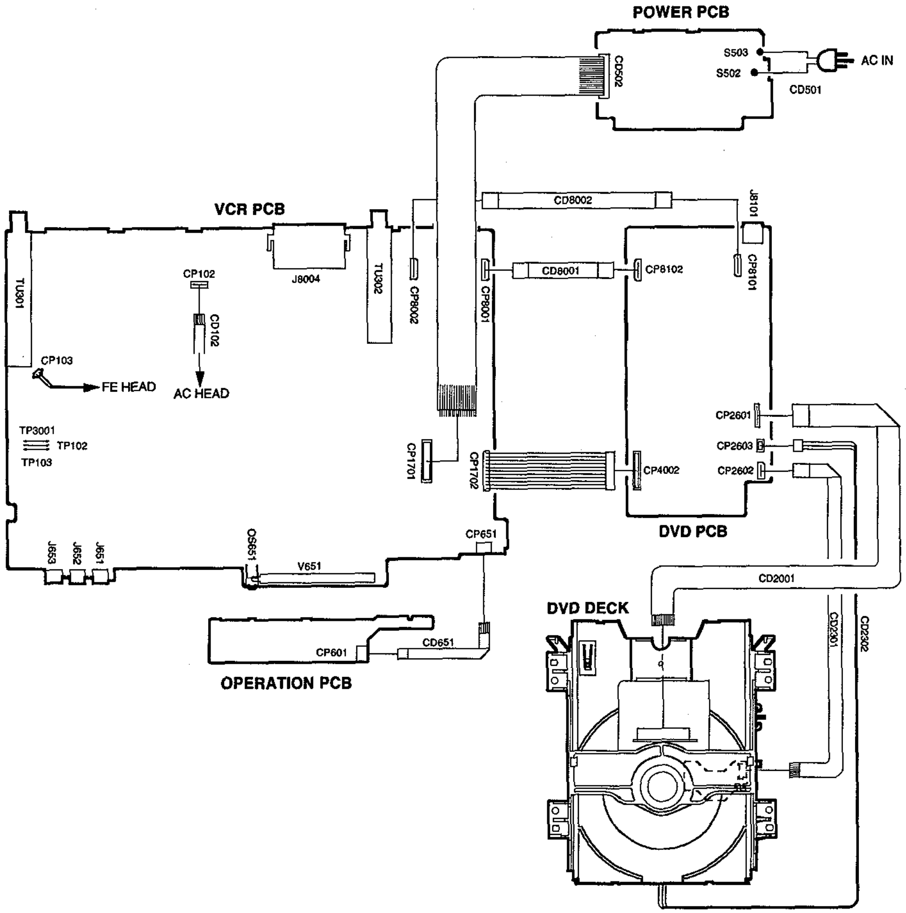


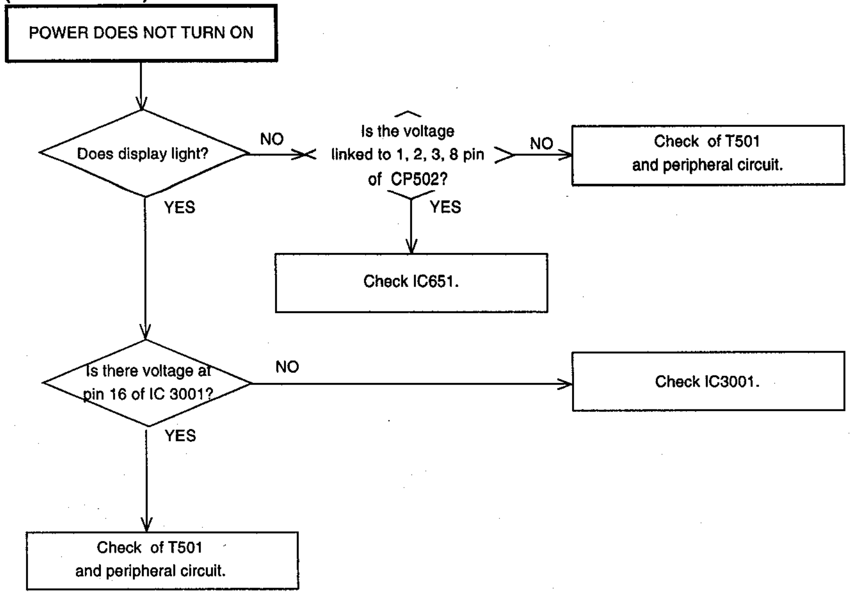
Fig. 1-1-B

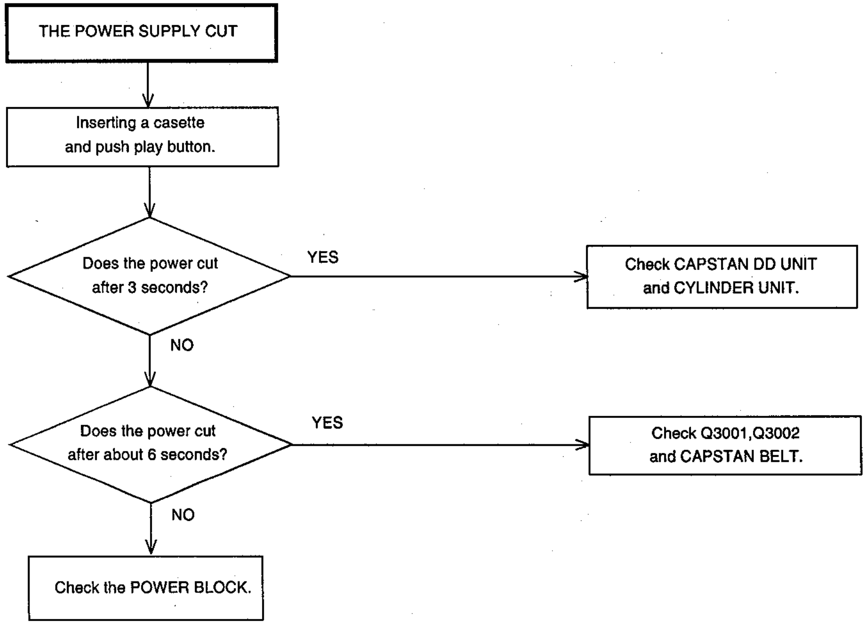
2. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)


POWER PCB
S503
S502
AC IN
CD502
CD501
VCR PCB
CD8002
J8101
TU301
CP102
J8004
TU302
CP8002
CP8001
CD8001
CP8102
CP8101
CD102
CP103
FE HEAD
AC HEAD
TP3001
TP102
TP103
CP1701
CP1702
CP4002
CP2601
CP2603
CP2602
DVD PCB
CP651
J653
J652
J651
OS651
V651
CD2001
DVD DECK
CD2301
CD2302
CP601
CD651
OPERATION PCB

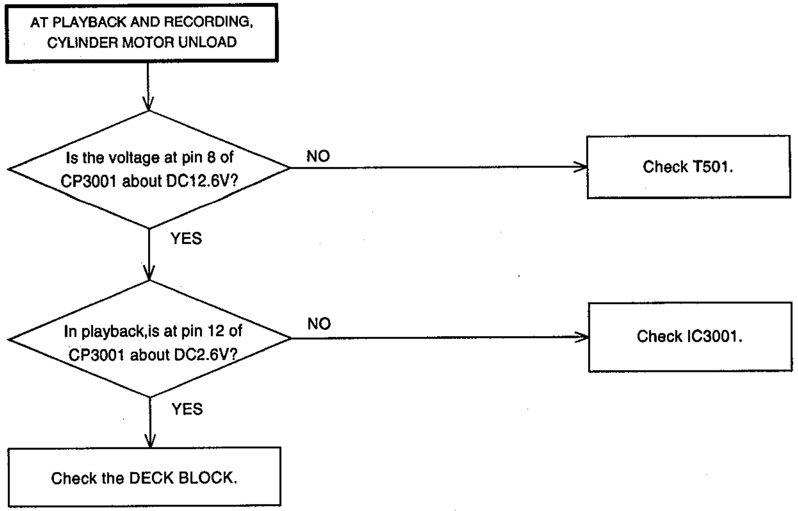
TROUBLE SHOOTING GUIDE

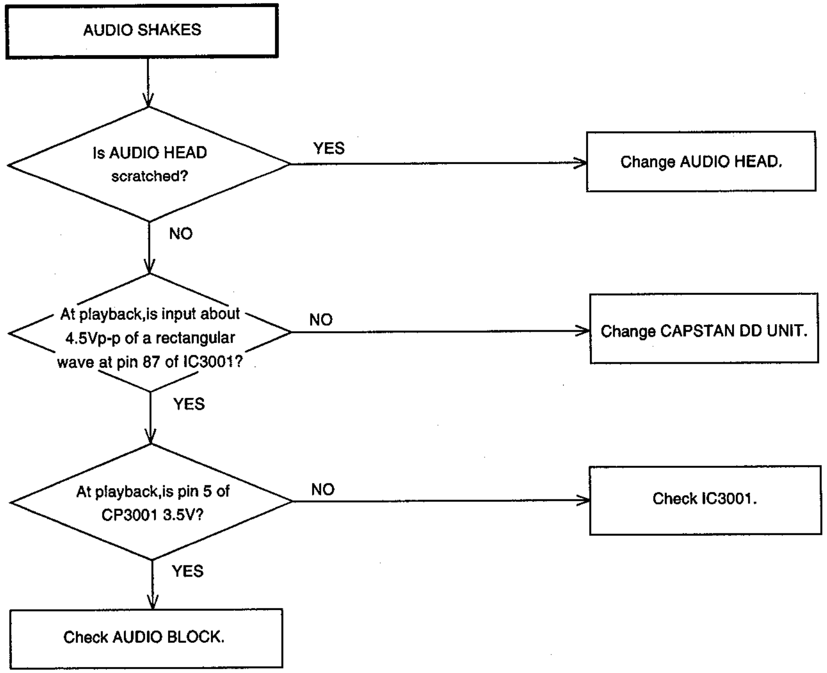
(VCR SECTION)

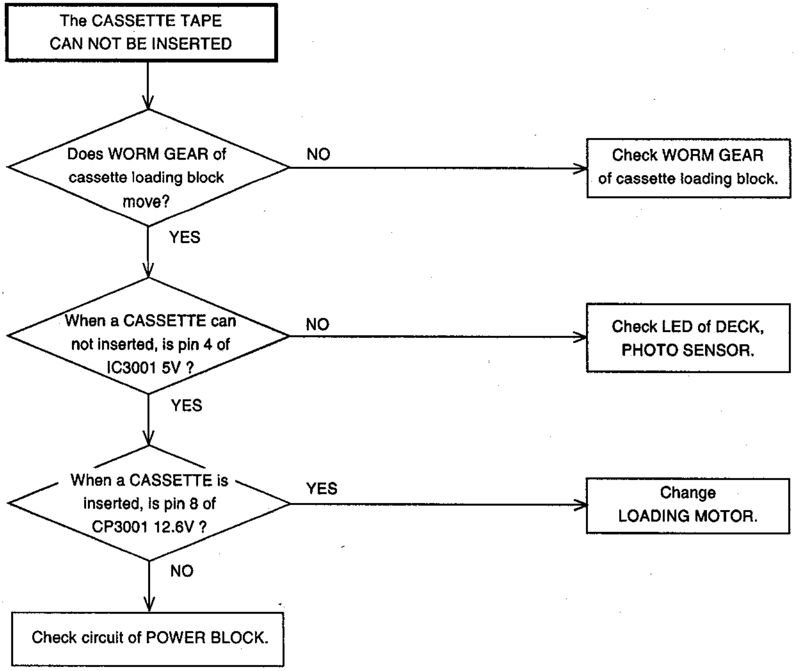

POWER DOES NOT TURN ON
Does display light?
NO
Is the voltage linked to 1, 2, 3, 8 pin of CP502?
NO
Check of T501 and peripheral circuit.
YES
Check IC651.
YES
Is there voltage at pin 16 of IC 3001?
NO
Check IC3001.
YES
Check of T501 and peripheral circuit.

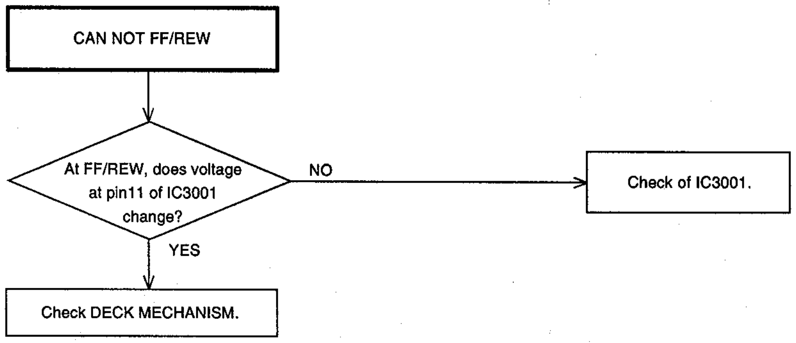

THE POWER SUPPLY CUT
Inserting a casette and push play button.
Does the power cut after 3 seconds?
YES
Check CAPSTAN DD UNIT and CYLINDER UNIT.
NO
Does the power cut after about 6 seconds?
YES
Check Q3001,Q3002 and CAPSTAN BELT.
NO
Check the POWER BLOCK.

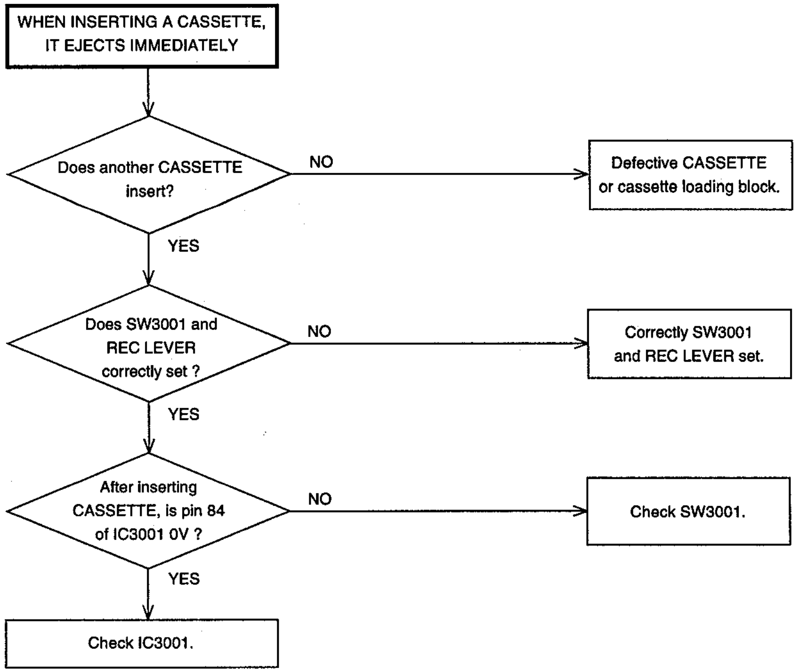
TROUBLE SHOOTING GUIDE

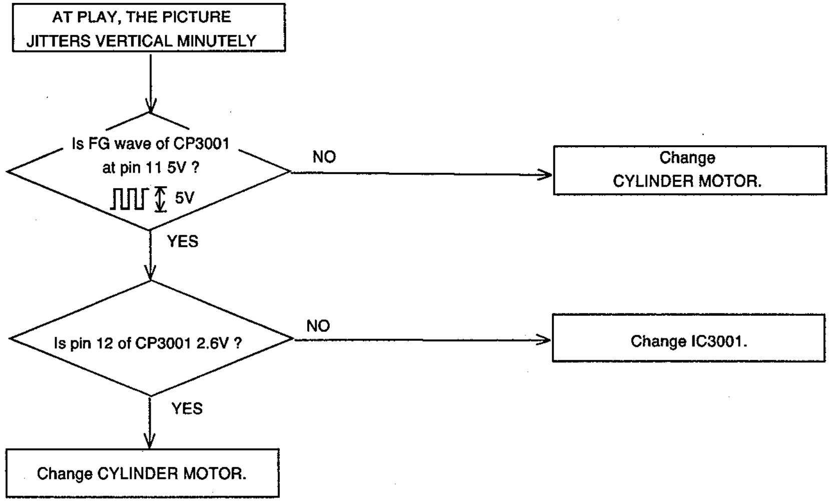

AT PLAYBACK AND RECORDING, CYLINDER MOTOR UNLOAD
Is the voltage at pin 8 of CP3001 about DC12.6V?
NO
Check T501.
YES
In playback,is at pin 12 of CP3001 about DC2.6V?
NO
Check IC3001.
YES
Check the DECK BLOCK.

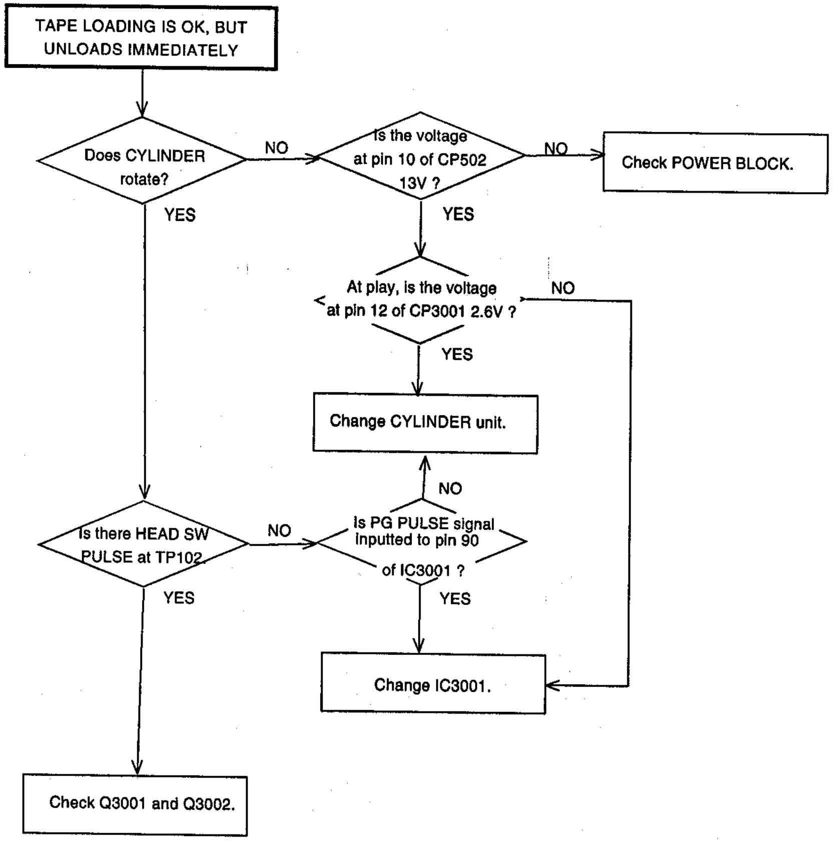

AUDIO SHAKES
Is AUDIO HEAD scratched?
YES
Change AUDIO HEAD.
NO
At playback,is input about 4.5Vp-p of a rectangular wave at pin 87 of IC3001?
NO
Change CAPSTAN DD UNIT.
YES
At playback,is pin 5 of CP3001 3.5V?
NO
Check IC3001.
YES
Check AUDIO BLOCK.

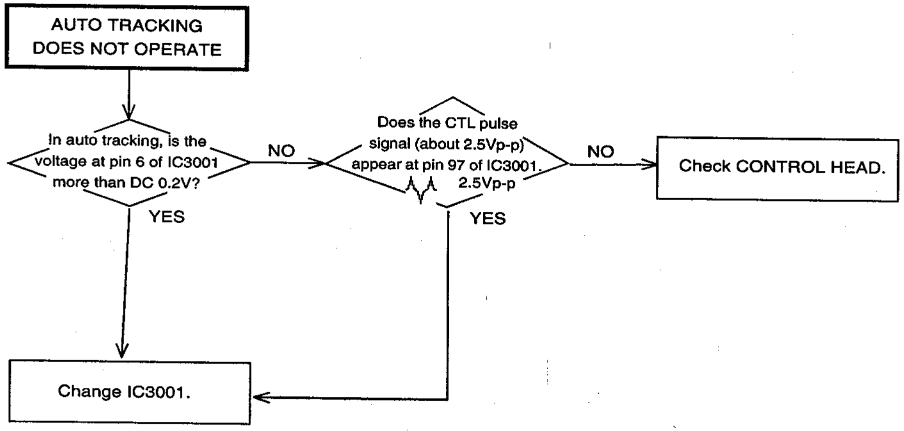

The CASSETTE TAPE CAN NOT BE INSERTED
Does WORM GEAR of cassette loading block move?
NO
Check WORM GEAR of cassette loading block.
YES
When a CASSETTE can not inserted, is pin 4 of IC3001 5V ?
NO
Check LED of DECK, PHOTO SENSOR.
YES
When a CASSETTE is inserted, is pin 8 of CP3001 12.6V ?
YES
Change LOADING MOTOR.
NO
Check circuit of POWER BLOCK.

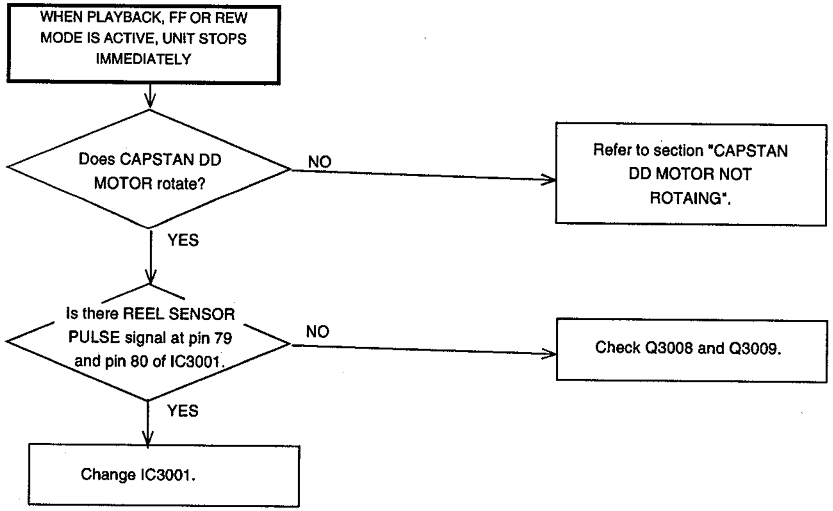

CAN NOT FF/REW
At FF/REW, does voltage at pin11 of IC3001 change?
NO
Check of IC3001.
YES
Check DECK MECHANISM.

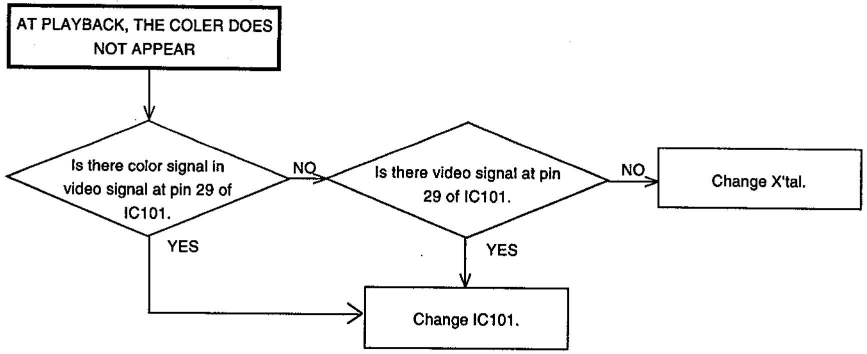

WHEN INSERTING A CASSETTE, IT EJECTS IMMEDIATELY
Does another CASSETTE insert?
NO
Defective CASSETTE or cassette loading block.
YES
Does SW3001 and REC LEVER correctly set ?
NO
Correctly SW3001 and REC LEVER set.
YES
After inserting CASSETTE, is pin 84 of IC3001 0V ?
NO
Check SW3001.
YES
Check IC3001.


AT PLAY, THE PICTURE JITTERS VERTICAL MINUTELY
Is FG wave of CP3001 at pin 11 5V ?
5V
NO
Change CYLINDER MOTOR.
YES
Is pin 12 of CP3001 2.6V ?
NO
Change IC3001.
YES
Change CYLINDER MOTOR.

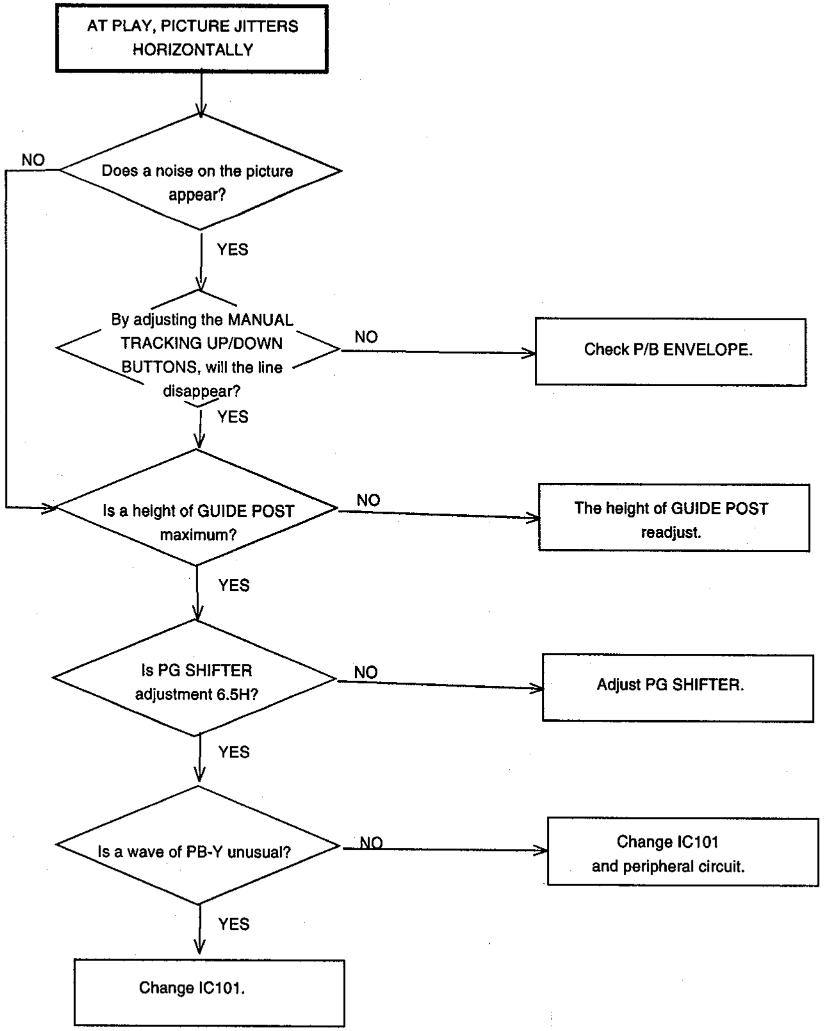

TAPE LOADING IS OK, BUT UNLOADS IMMEDIATELY
Does CYLINDER rotate?
NO
Is the voltage at pin 10 of CP502 13V ?
NO
Check POWER BLOCK.
YES
YES
At play, is the voltage at pin 12 of CP3001 2.6V ?
NO
YES
Change CYLINDER unit.
NO
Is there HEAD SW PULSE at TP102.
NO
Is PG PULSE signal inputted to pin 90 of IC3001 ?
YES
YES
Change IC3001.
Check Q3001 and Q3002.


AUTO TRACKING DOES NOT OPERATE
In auto tracking, is the voltage at pin 6 of IC3001 more than DC 0.2V?
NO
Does the CTL pulse signal (about 2.5Vp-p) appear at pin 97 of IC3001.
2.5Vp-p
NO
Check CONTROL HEAD.
YES
YES
Change IC3001.

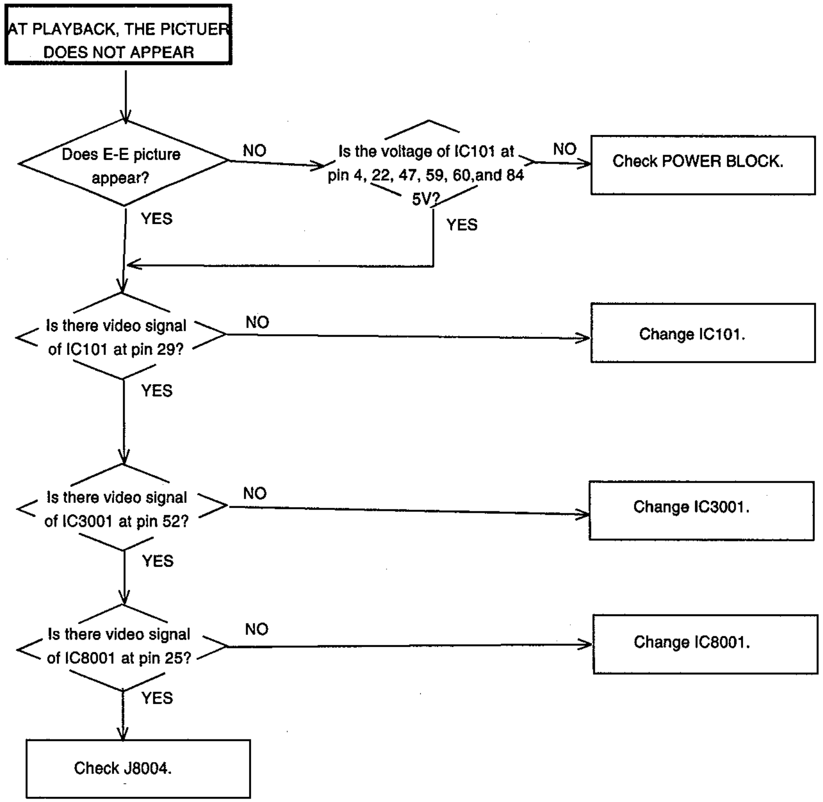

WHEN PLAYBACK, FF OR REW MODE IS ACTIVE, UNIT STOPS IMMEDIATELY
Does CAPSTAN DD MOTOR rotate?
NO
Refer to section "CAPSTAN DD MOTOR NOT ROTAING".
YES
Is there REEL SENSOR PULSE signal at pin 79 and pin 80 of IC3001.
NO
Check Q3008 and Q3009.
YES
Change IC3001.

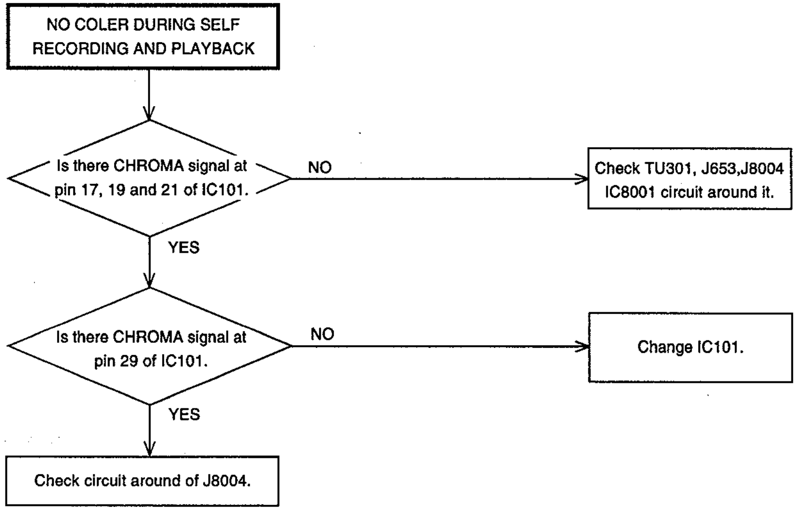

AT PLAYBACK, THE COLER DOES NOT APPEAR
Is there color signal in video signal at pin 29 of IC101.
NO
Is there video signal at pin 29 of IC101.
NO
Change X'tal.
YES
YES
Change IC101.

TROUBLE SHOOTING GUIDE

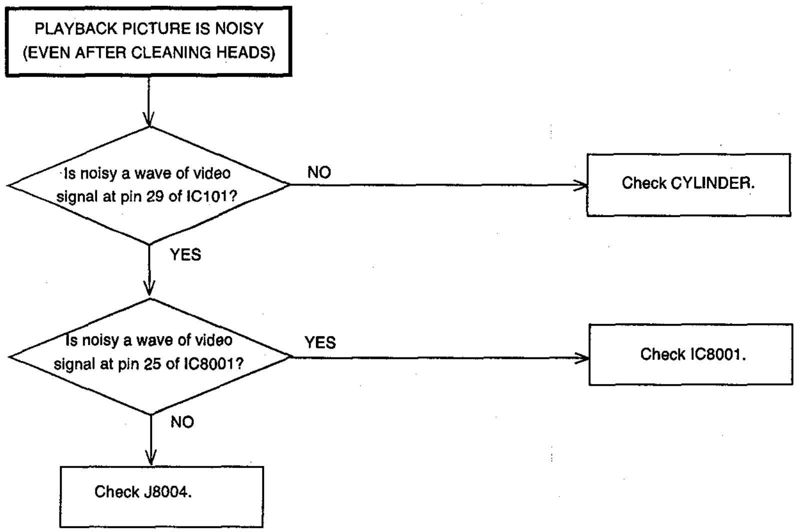

AT PLAY, PICTURE JITTERS HORIZONTALLY
Does a noise on the picture appear?
NO
YES
By adjusting the MANUAL TRACKING UP/DOWN BUTTONS, will the line disappear?
NO
Check P/B ENVELOPE.
YES
Is a height of GUIDE POST maximum?
NO
The height of GUIDE POST readjust.
YES
Is PG SHIFTER adjustment 6.5H?
NO
Adjust PG SHIFTER.
YES
Is a wave of PB-Y unusual?
NO
Change IC101 and peripheral circuit.
YES
Change IC101.

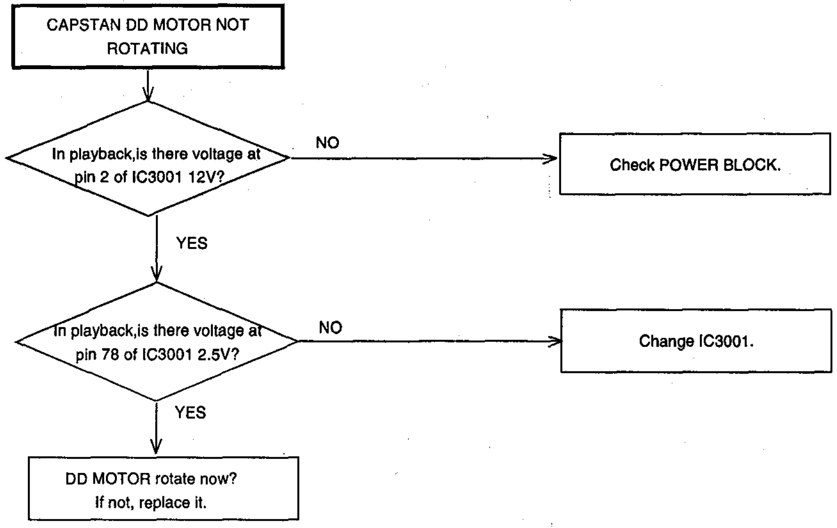
TROUBLE SHOOTING GUIDE


AT PLAYBACK, THE PICTUER DOES NOT APPEAR
Does E-E picture appear?
NO
Is the voltage of IC101 at pin 4, 22, 47, 59, 60,and 84 5V?
NO
Check POWER BLOCK.
YES
YES
Is there video signal of IC101 at pin 29?
NO
Change IC101.
YES
Is there video signal of IC3001 at pin 52?
NO
Change IC3001.
YES
Is there video signal of IC8001 at pin 25?
NO
Change IC8001.
YES
Check J8004.

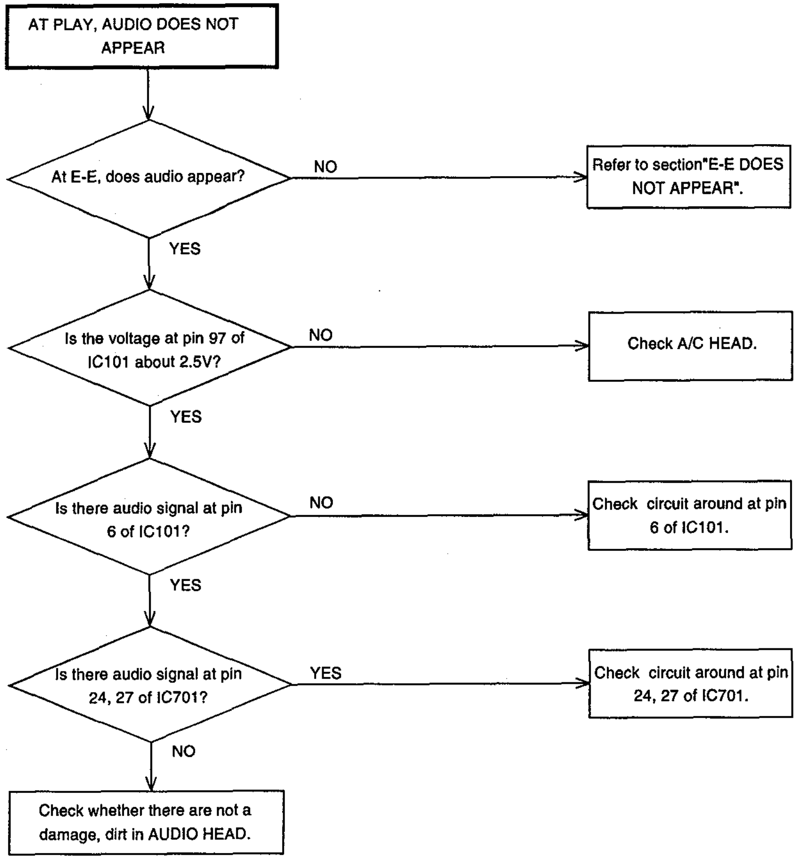

NO COLER DURING SELF RECORDING AND PLAYBACK
Is there CHROMA signal at pin 17, 19 and 21 of IC101.
NO
Check TU301, J653,J8004 IC8001 circuit around it.
YES
Is there CHROMA signal at pin 29 of IC101.
NO
Change IC101.
YES
Check circuit around of J8004.

TROUBLE SHOOTING GUIDE

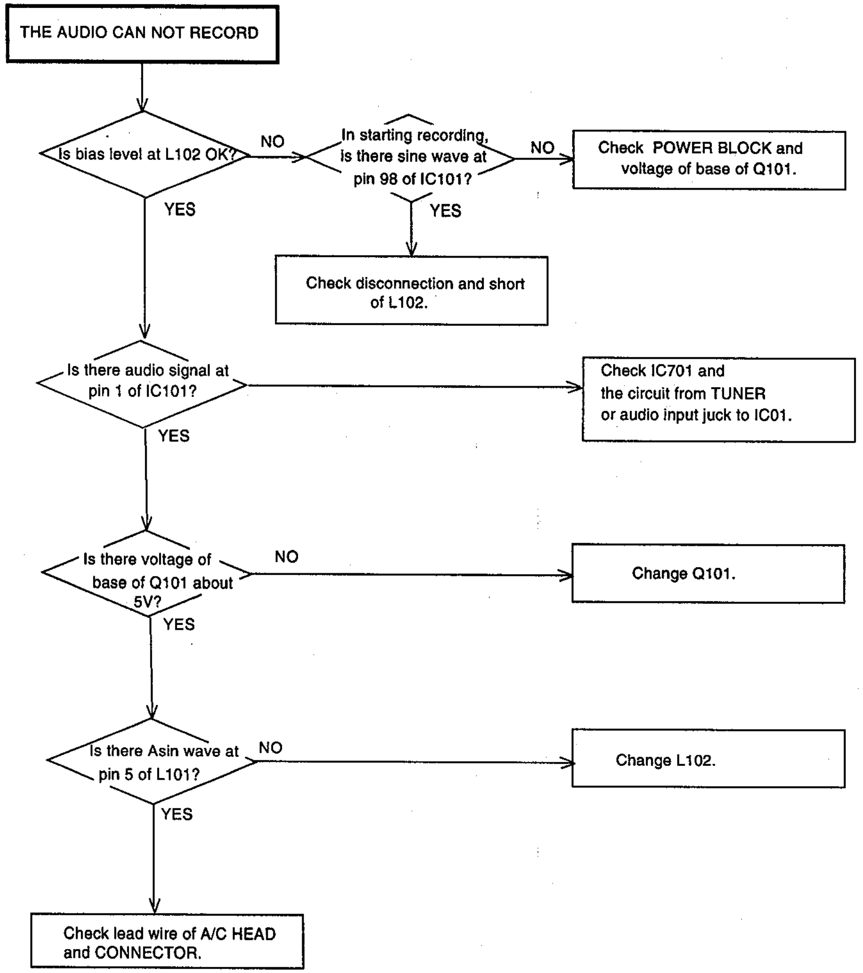

PLAYBACK PICTURE IS NOISY (EVEN AFTER CLEANING HEADS)
Is noisy a wave of video signal at pin 29 of IC101?
NO
Check CYLINDER.
YES
Is noisy a wave of video signal at pin 25 of IC8001?
YES
Check IC8001.
NO
Check J8004.


CAPSTAN DD MOTOR NOT ROTATING
In playback,is there voltage at pin 2 of IC3001 12V?
NO
Check POWER BLOCK.
YES
In playback,is there voltage at pin 78 of IC3001 2.5V?
NO
Change IC3001.
YES
DD MOTOR rotate now? If not, replace it.

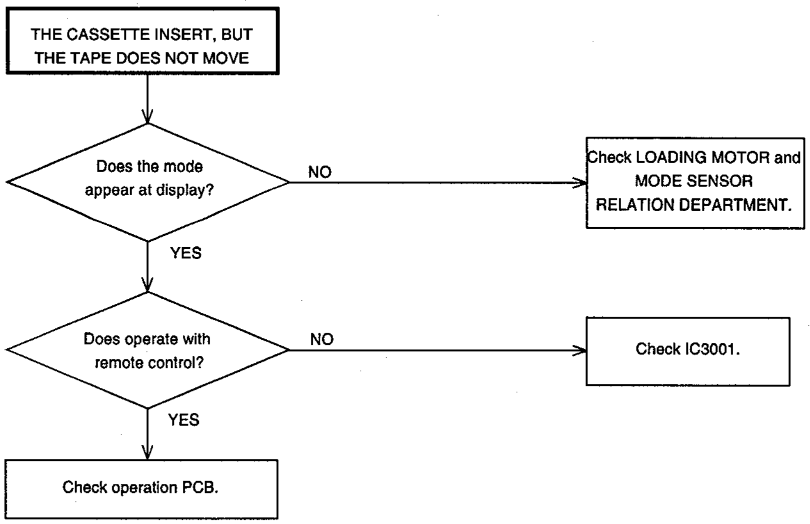
TROUBLE SHOOTING GUIDE

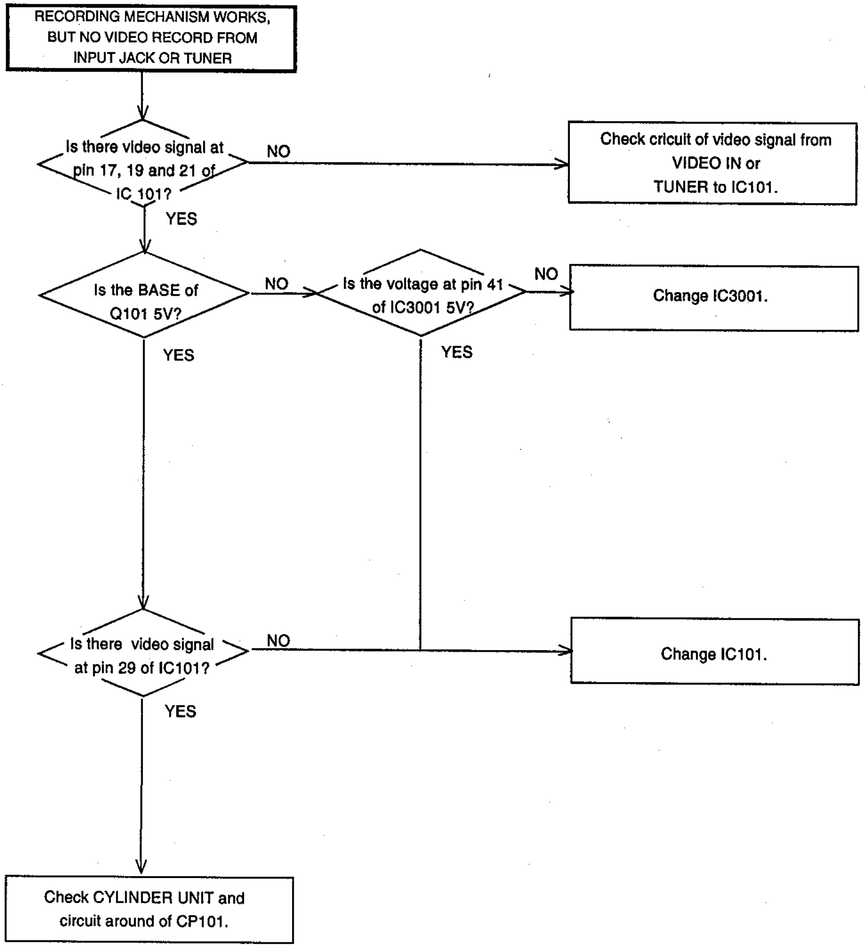

AT PLAY, AUDIO DOES NOT APPEAR
At E-E, does audio appear?
NO
Refer to section"E-E DOES NOT APPEAR".
YES
Is the voltage at pin 97 of IC101 about 2.5V?
NO
Check A/C HEAD.
YES
Is there audio signal at pin 6 of IC101?
NO
Check circuit around at pin 6 of IC101.
YES
Is there audio signal at pin 24, 27 of IC701?
YES
Check circuit around at pin 24, 27 of IC701.
NO
Check whether there are not a damage, dirt in AUDIO HEAD.

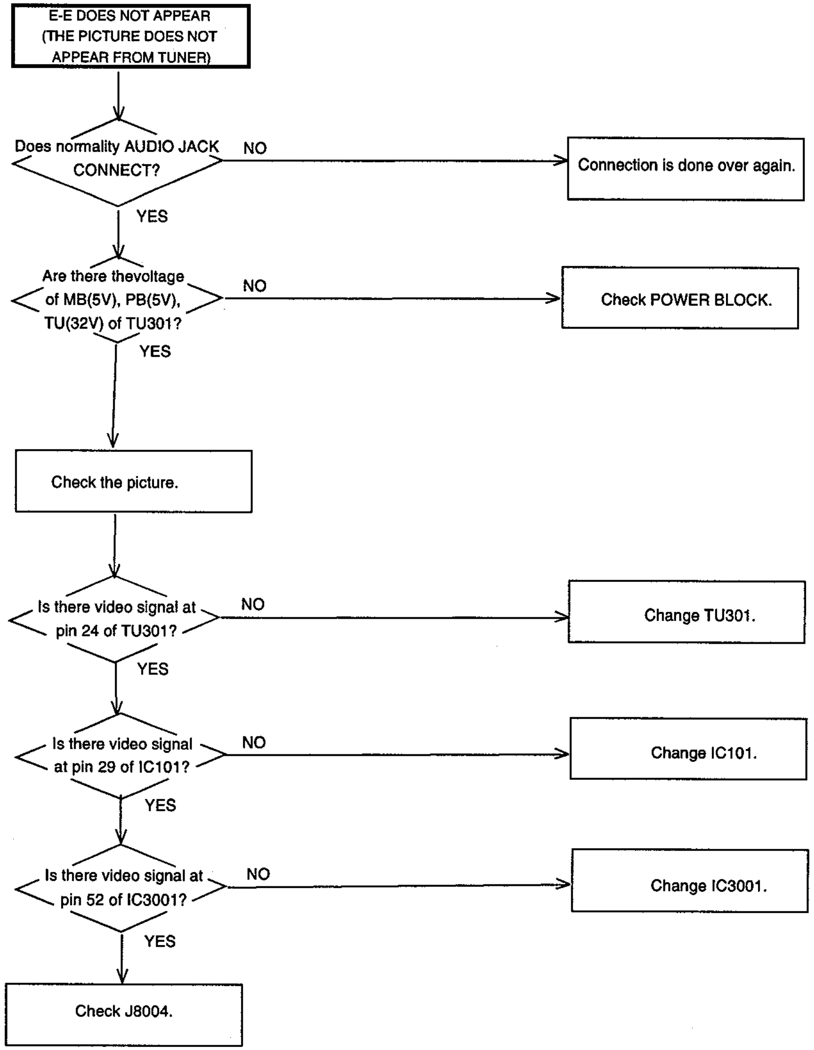
TROUBLE SHOOTING GUIDE


THE AUDIO CAN NOT RECORD
Is bias level at L102 OK?
NO
In starting recording, is there sine wave at pin 98 of IC101?
NO
Check POWER BLOCK and voltage of base of Q101.
YES
YES
Check disconnection and short of L102.
Is there audio signal at pin 1 of IC101?
Check IC701 and the circuit from TUNER or audio input juck to IC01.
YES
Is there voltage of base of Q101 about 5V?
NO
Change Q101.
YES
Is there Asin wave at pin 5 of L101?
NO
Change L102.
YES
Check lead wire of A/C HEAD and CONNECTOR.

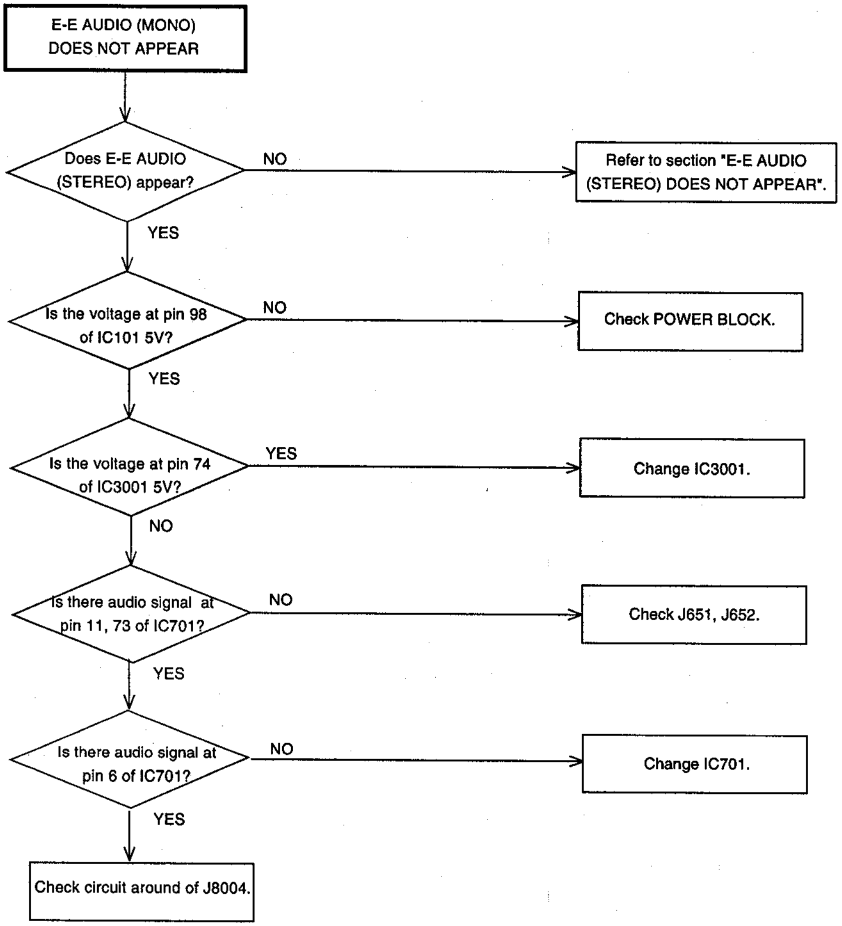
TROUBLE SHOOTING GUIDE


THE CASSETTE INSERT, BUT THE TAPE DOES NOT MOVE
Does the mode appear at display?
NO
Check LOADING MOTOR and MODE SENSOR RELATION DEPARTMENT.
YES
Does operate with remote control?
NO
Check IC3001.
YES
Check operation PCB.

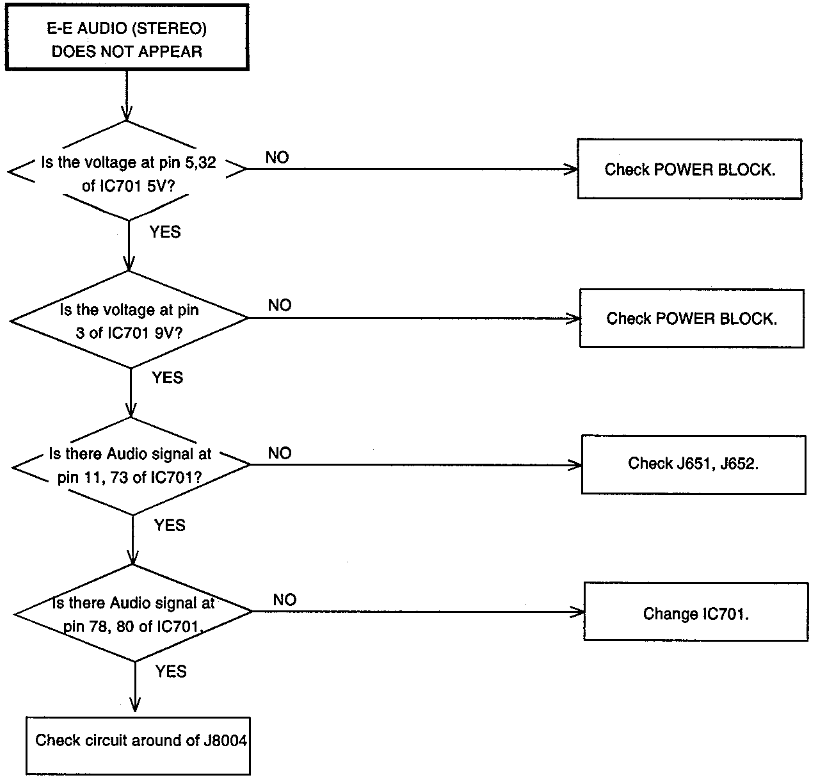

RECORDING MECHANISM WORKS, BUT NO VIDEO RECORD FROM INPUT JACK OR TUNER
Is there video signal at pin 17, 19 and 21 of IC 101?
NO
Check cricuit of video signal from VIDEO IN or TUNER to IC101.
YES
Is the BASE of Q101 5V?
NO
Is the voltage at pin 41 of IC3001 5V?
NO
Change IC3001.
YES
YES
Is there video signal at pin 29 of IC101?
NO
Change IC101.
YES
Check CYLINDER UNIT and circuit around of CP101.

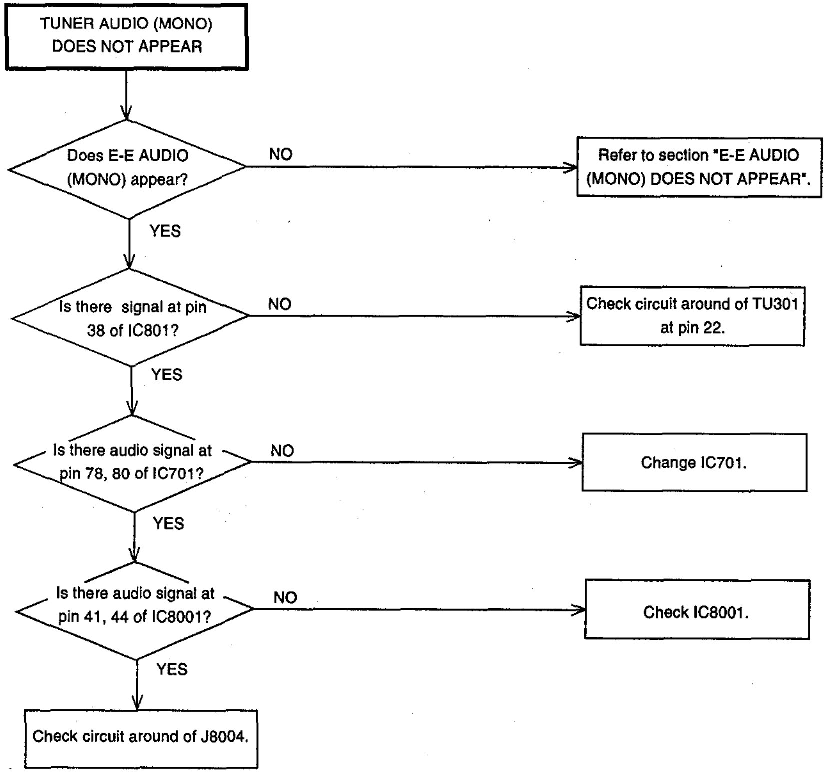

E-E DOES NOT APPEAR (THE PICTURE DOES NOT APPEAR FROM TUNER)
Does normality AUDIO JACK CONNECT?
NO
Connection is done over again.
YES
Are there thevoltage of MB(5V), PB(5V), TU(32V) of TU301?
NO
Check POWER BLOCK.
YES
Check the picture.
Is there video signal at pin 24 of TU301?
NO
Change TU301.
YES
Is there video signal at pin 29 of IC101?
NO
Change IC101.
YES
Is there video signal at pin 52 of IC3001?
NO
Change IC3001.
YES
Check J8004.

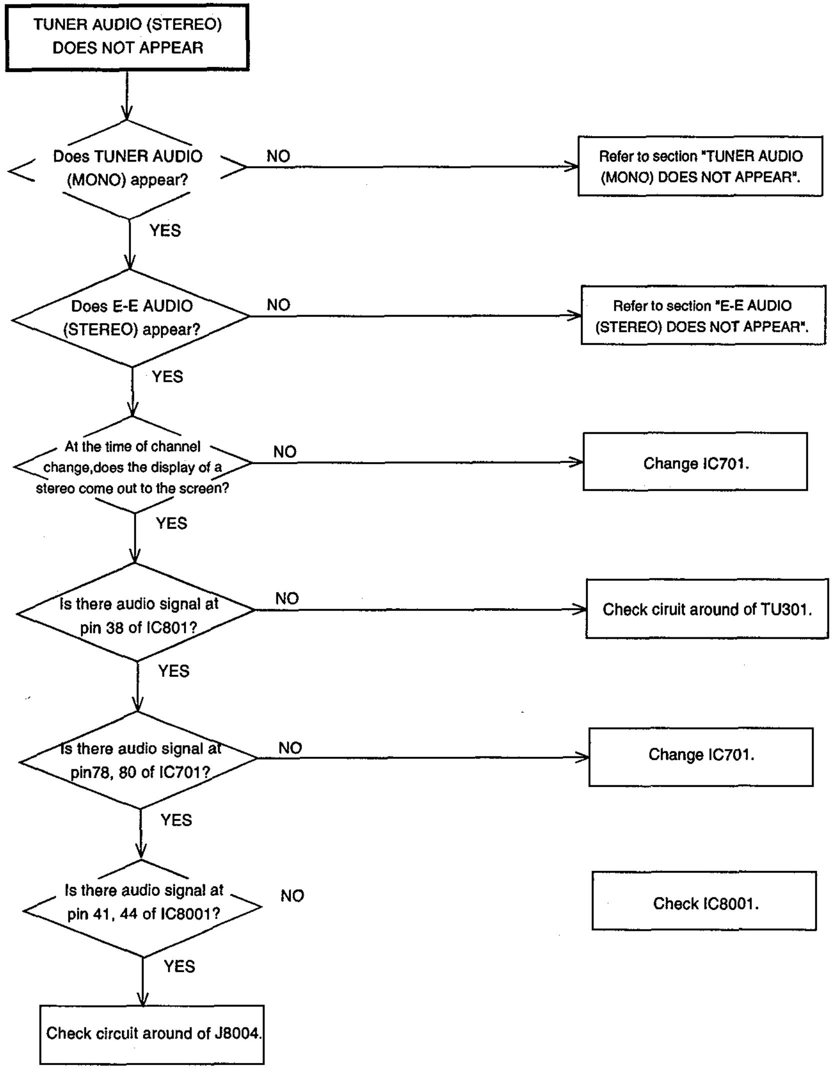
TROUBLE SHOOTING GUIDE


E-E AUDIO (MONO) DOES NOT APPEAR
Does E-E AUDIO (STEREO) appear?
NO
Refer to section "E-E AUDIO (STEREO) DOES NOT APPEAR".
YES
Is the voltage at pin 98 of IC101 5V?
NO
Check POWER BLOCK.
YES
Is the voltage at pin 74 of IC3001 5V?
YES
Change IC3001.
NO
Is there audio signal at pin 11, 73 of IC701?
NO
Check J651, J652.
YES
Is there audio signal at pin 6 of IC701?
NO
Change IC701.
YES
Check circuit around of J8004.

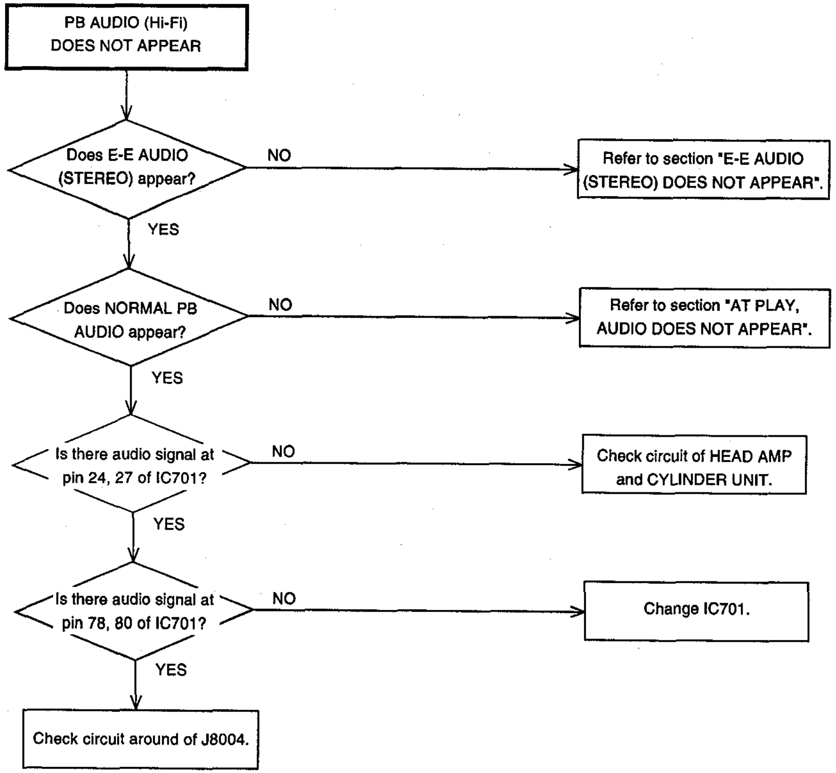
TROUBLE SHOOTING GUIDE


E-E AUDIO (STEREO) DOES NOT APPEAR
Is the voltage at pin 5,32 of IC701 5V?
NO
Check POWER BLOCK.
YES
Is the voltage at pin 3 of IC701 9V?
NO
Check POWER BLOCK.
YES
Is there Audio signal at pin 11, 73 of IC701?
NO
Check J651, J652.
YES
Is there Audio signal at pin 78, 80 of IC701.
NO
Change IC701.
YES
Check circuit around of J8004

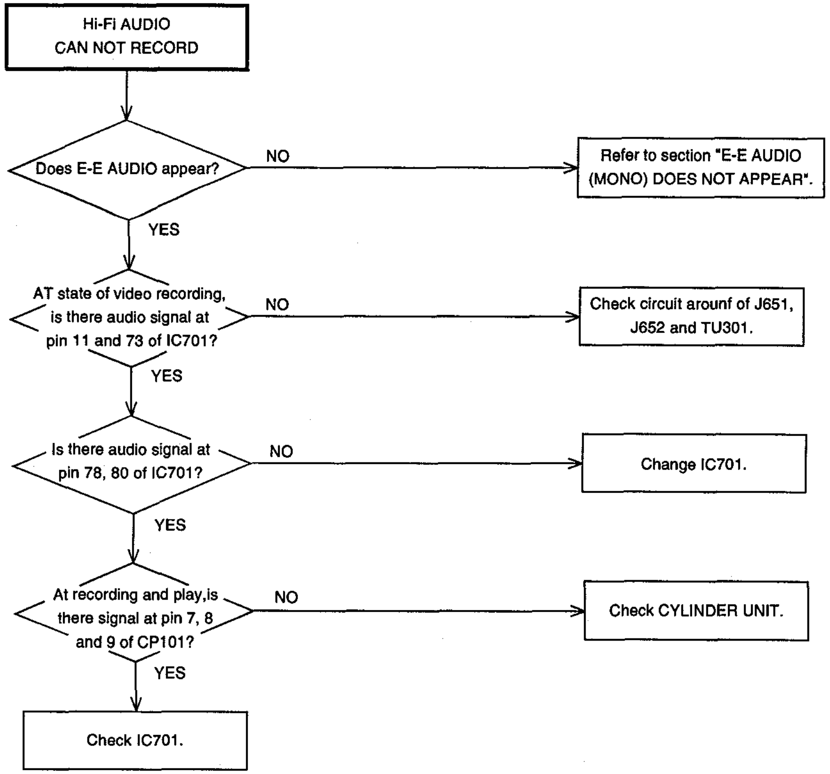

TUNER AUDIO (MONO) DOES NOT APPEAR
Does E-E AUDIO (MONO) appear?
NO
Refer to section "E-E AUDIO (MONO) DOES NOT APPEAR".
YES
Is there signal at pin 38 of IC801?
NO
Check circuit around of TU301 at pin 22.
YES
Is there audio signal at pin 78, 80 of IC701?
NO
Change IC701.
YES
Is there audio signal at pin 41, 44 of IC8001?
NO
Check IC8001.
YES
Check circuit around of J8004.


TUNER AUDIO (STEREO) DOES NOT APPEAR
Does TUNER AUDIO (MONO) appear?
NO
Refer to section "TUNER AUDIO (MONO) DOES NOT APPEAR".
YES
Does E-E AUDIO (STEREO) appear?
NO
Refer to section "E-E AUDIO (STEREO) DOES NOT APPEAR".
YES
At the time of channel change,does the display of a stereo come out to the screen?
NO
Change IC701.
YES
Is there audio signal at pin 38 of IC801?
NO
Check ciruit around of TU301.
YES
Is there audio signal at pin78, 80 of IC701?
NO
Change IC701.
YES
Is there audio signal at pin 41, 44 of IC8001?
NO
Check IC8001.
YES
Check circuit around of J8004.

TROUBLE SHOOTING GUIDE

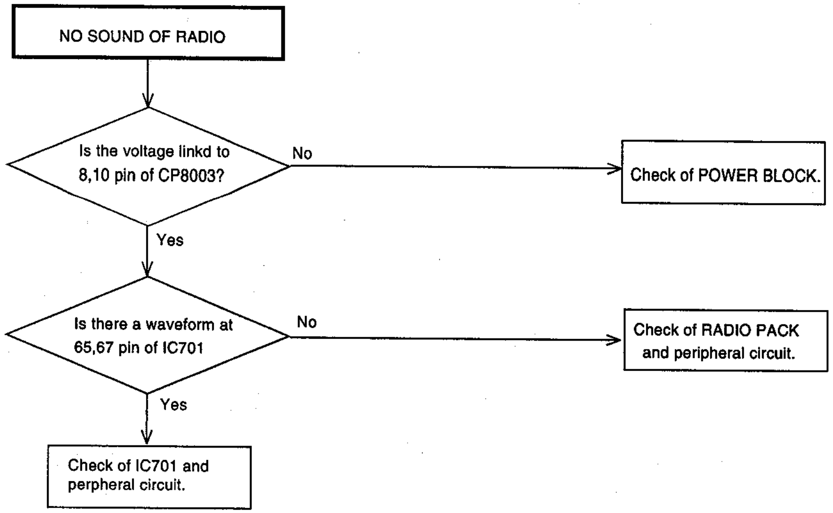

PB AUDIO (Hi-Fi)
DOES NOT APPEAR
Does E-E AUDIO (STEREO) appear?
NO
Refer to section "E-E AUDIO (STEREO) DOES NOT APPEAR".
YES
Does NORMAL PB AUDIO appear?
NO
Refer to section "AT PLAY, AUDIO DOES NOT APPEAR".
YES
Is there audio signal at pin 24, 27 of IC701?
NO
Check circuit of HEAD AMP and CYLINDER UNIT.
YES
Is there audio signal at pin 78, 80 of IC701?
NO
Change IC701.
YES
Check circuit around of J8004.

TROUBLE SHOOTING GUIDE

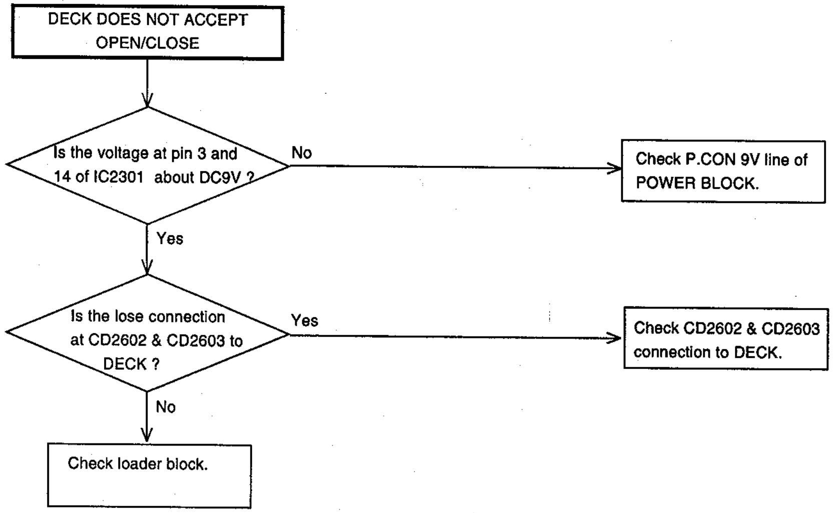

Hi-Fi AUDIO
CAN NOT RECORD
Does E-E AUDIO appear?
NO
Refer to section "E-E AUDIO (MONO) DOES NOT APPEAR".
YES
AT state of video recording, is there audio signal at pin 11 and 73 of IC701?
NO
Check circuit arounf of J651, J652 and TU301.
YES
Is there audio signal at pin 78, 80 of IC701?
NO
Change IC701.
YES
At recording and play,is there signal at pin 7, 8 and 9 of CP101?
NO
Check CYLINDER UNIT.
YES
Check IC701.

TROUBLE SHOOTING GUIDE

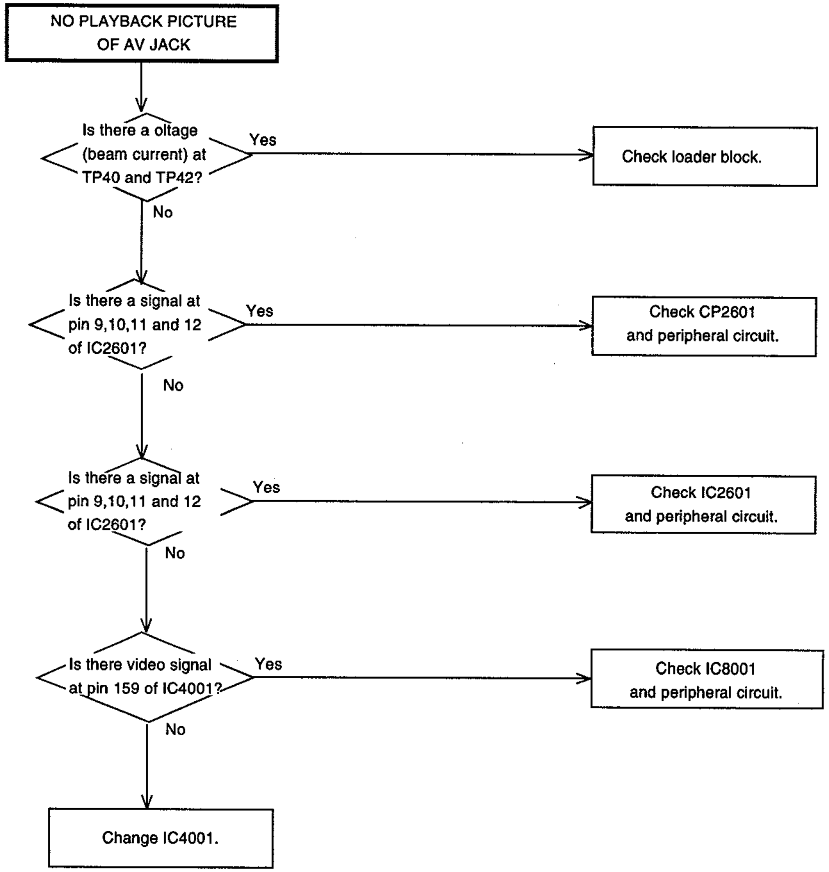
(RADIO SECTION)

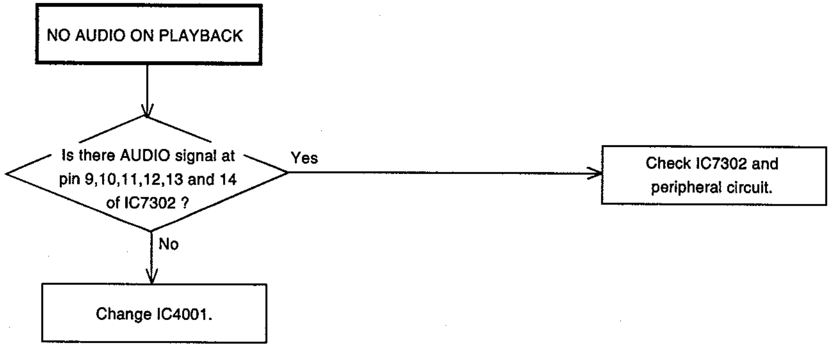

NO SOUND OF RADIO
Is the voltage linkd to 8,10 pin of CP8003?
No
Check of POWER BLOCK.
Yes
Is there a waveform at 65,67 pin of IC701
No
Check of RADIO PACK and peripheral circuit.
Yes
Check of IC701 and perpheral circuit.

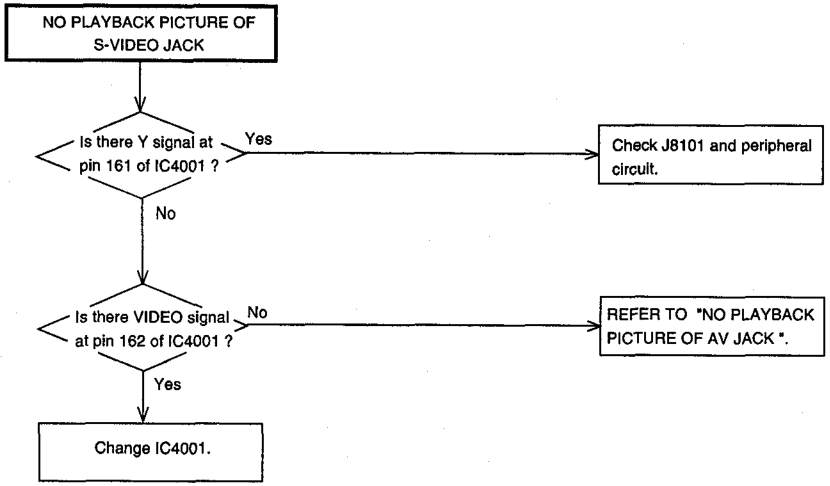
(DVD SECTION)

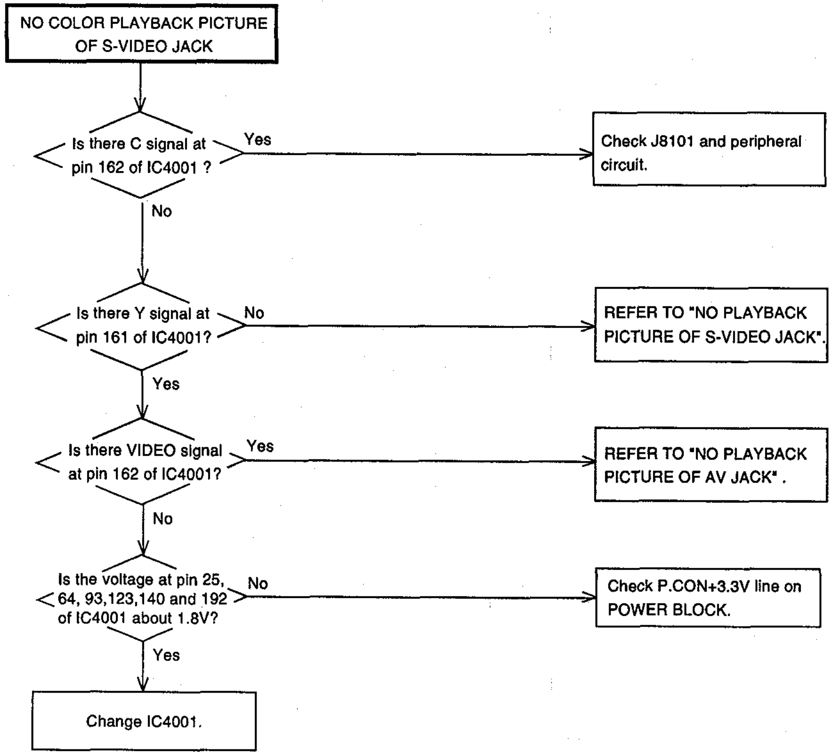

DECK DOES NOT ACCEPT OPEN/CLOSE
Is the voltage at pin 3 and 14 of IC2301 about DC9V ?
No
Check P.CON 9V line of POWER BLOCK.
Yes
Is the lose connection at CD2602 & CD2603 to DECK ?
Yes
Check CD2602 & CD2603 connection to DECK.
No
Check loader block.

TROUBLE SHOOTING GUIDE

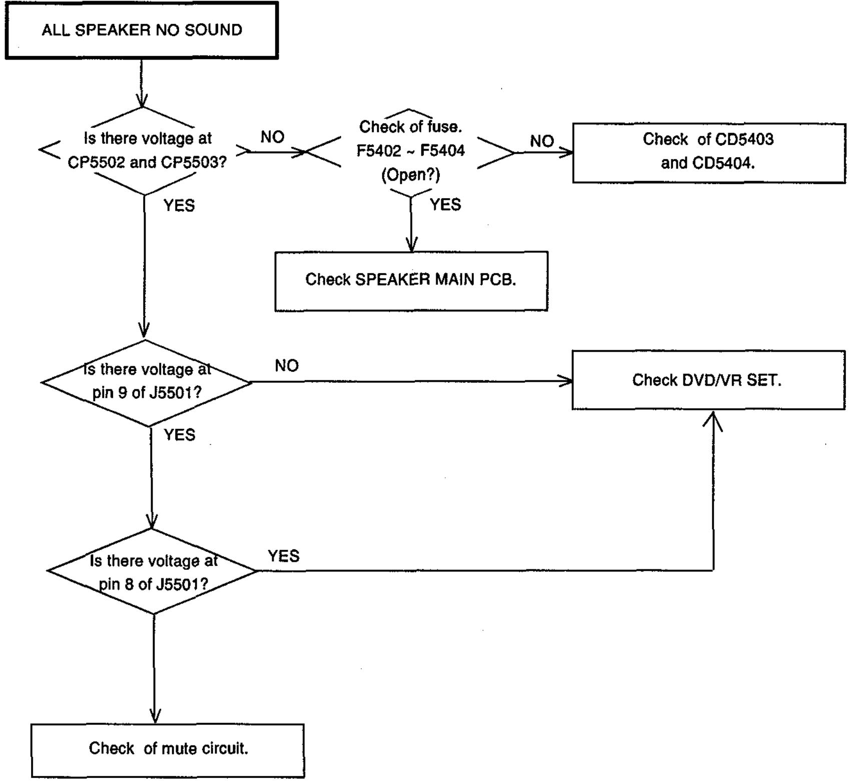

NO PLAYBACK PICTURE OF AV JACK
Is there a oltage (beam current) at TP40 and TP42?
Yes
Check loader block.
No
Is there a signal at pin 9,10,11 and 12 of IC2601?
Yes
Check CP2601 and peripheral circuit.
No
Is there a signal at pin 9,10,11 and 12 of IC2601?
Yes
Check IC2601 and peripheral circuit.
No
Is there video signal at pin 159 of IC4001?
Yes
Check IC8001 and peripheral circuit.
No
Change IC4001.

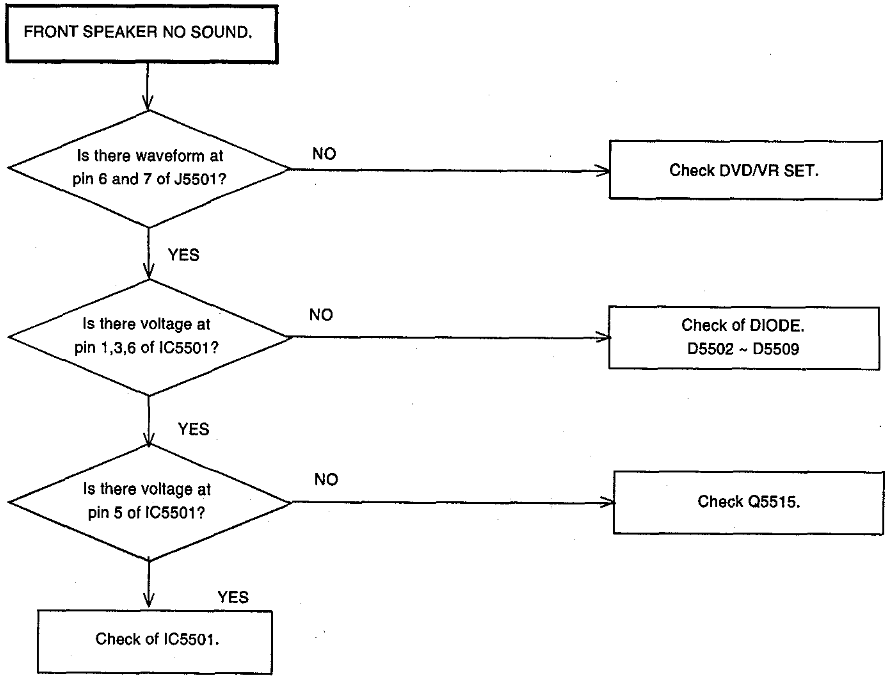

NO AUDIO ON PLAYBACK
Is there AUDIO signal at pin 9,10,11,12,13 and 14 of IC7302 ?
Yes
Check IC7302 and peripheral circuit.
No
Change IC4001.

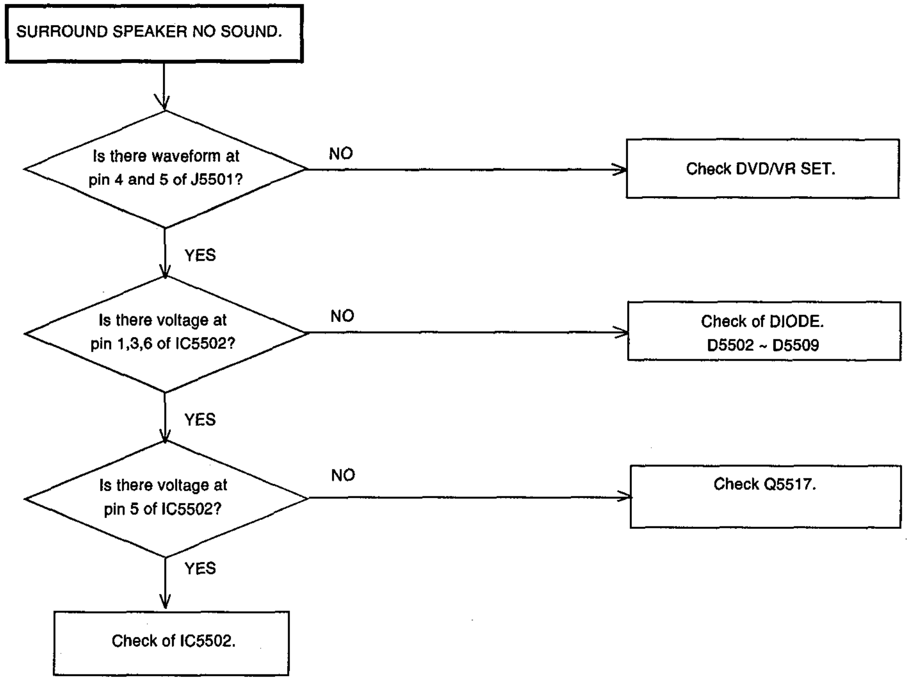

NO PLAYBACK PICTURE OF S-VIDEO JACK
Is there Y signal at pin 161 of IC4001 ?
Yes
Check J8101 and peripheral circuit.
No
Is there VIDEO signal at pin 162 of IC4001 ?
No
REFER TO "NO PLAYBACK PICTURE OF AV JACK ".
Yes
Change IC4001.


NO COLOR PLAYBACK PICTURE OF S-VIDEO JACK
Is there C signal at pin 162 of IC4001 ?
Yes
Check J8101 and peripheral circuit.
No
Is there Y signal at pin 161 of IC4001?
No
REFER TO "NO PLAYBACK PICTURE OF S-VIDEO JACK".
Yes
Is there VIDEO signal at pin 162 of IC4001?
Yes
REFER TO "NO PLAYBACK PICTURE OF AV JACK" .
No
Is the voltage at pin 25, 64, 93,123,140 and 192 of IC4001 about 1.8V?
No
Check P.CON+3.3V line on POWER BLOCK.
Yes
Change IC4001.

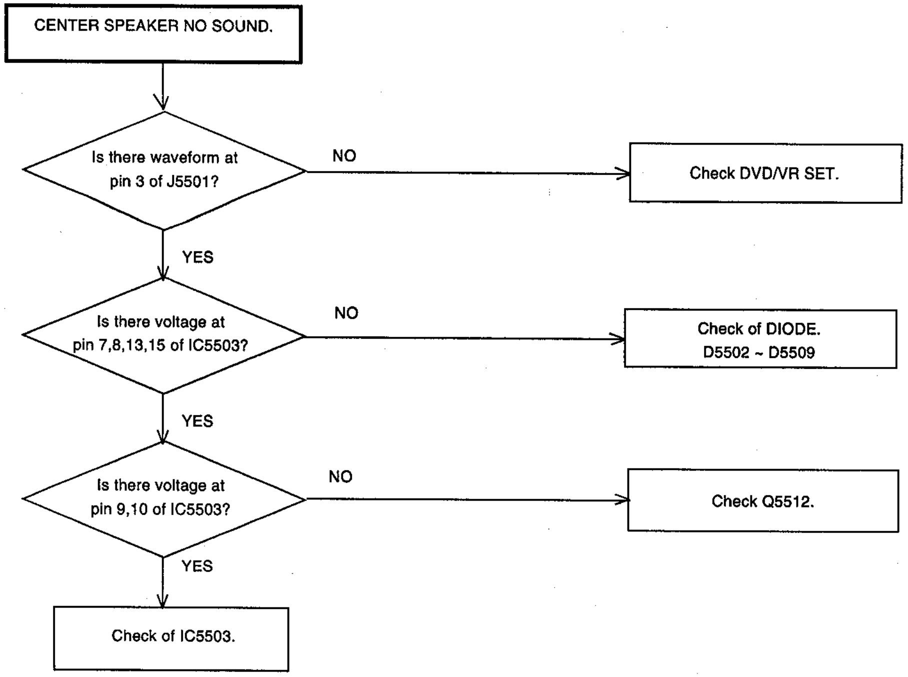
(SPEAKER SECTION)

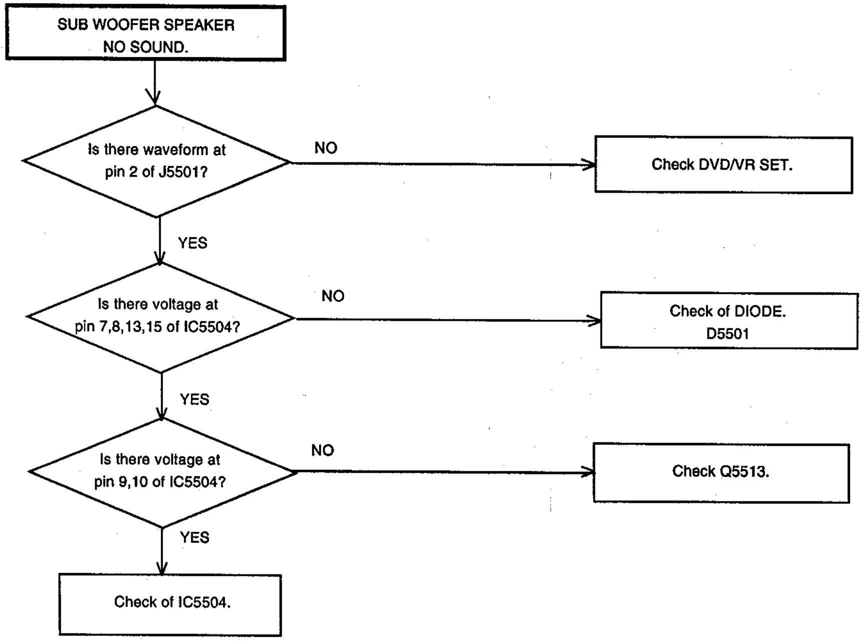

ALL SPEAKER NO SOUND
Is there voltage at CP5502 and CP5503?
NO
Check of fuse. F5402 ~ F5404 (Open?)
NO
Check of CD5403 and CD5404.
YES
Check SPEAKER MAIN PCB.
YES
Is there voltage at pin 9 of J5501?
NO
Check DVD/VR SET.
YES
Is there voltage at pin 8 of J5501?
YES
Check of mute circuit.


FRONT SPEAKER NO SOUND.
Is there waveform at pin 6 and 7 of J5501?
NO
Check DVD/VR SET.
YES
Is there voltage at pin 1,3,6 of IC5501?
NO
Check of DIODE. D5502 ~ D5509
YES
Is there voltage at pin 5 of IC5501?
NO
Check Q5515.
YES
Check of IC5501.


SURROUND SPEAKER NO SOUND.
Is there waveform at pin 4 and 5 of J5501?
NO
Check DVD/VR SET.
YES
Is there voltage at pin 1,3,6 of IC5502?
NO
Check of DIODE. D5502 ~ D5509
YES
Is there voltage at pin 5 of IC5502?
NO
Check Q5517.
YES
Check of IC5502.

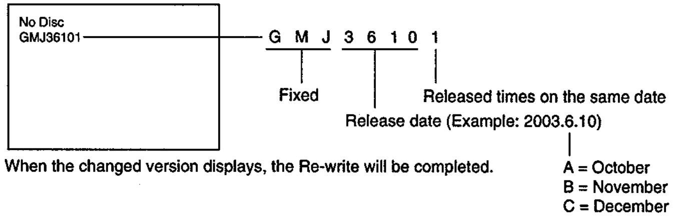
TROUBLE SHOOTING GUIDE


CENTER SPEAKER NO SOUND.
Is there waveform at pin 3 of J5501?
NO
Check DVD/VR SET.
YES
Is there voltage at pin 7,8,13,15 of IC5503?
NO
Check of DIODE. D5502 ~ D5509
YES
Is there voltage at pin 9,10 of IC5503?
NO
Check Q5512.
YES
Check of IC5503.


SUB WOOFER SPEAKER NO SOUND.
Is there waveform at pin 2 of J5501?
NO
Check DVD/VR SET.
YES
Is there voltage at pin 7,8,13,15 of IC5504?
NO
Check of DIODE. D5501
YES
Is there voltage at pin 9,10 of IC5504?
NO
Check Q5513.
YES
Check of IC5504.

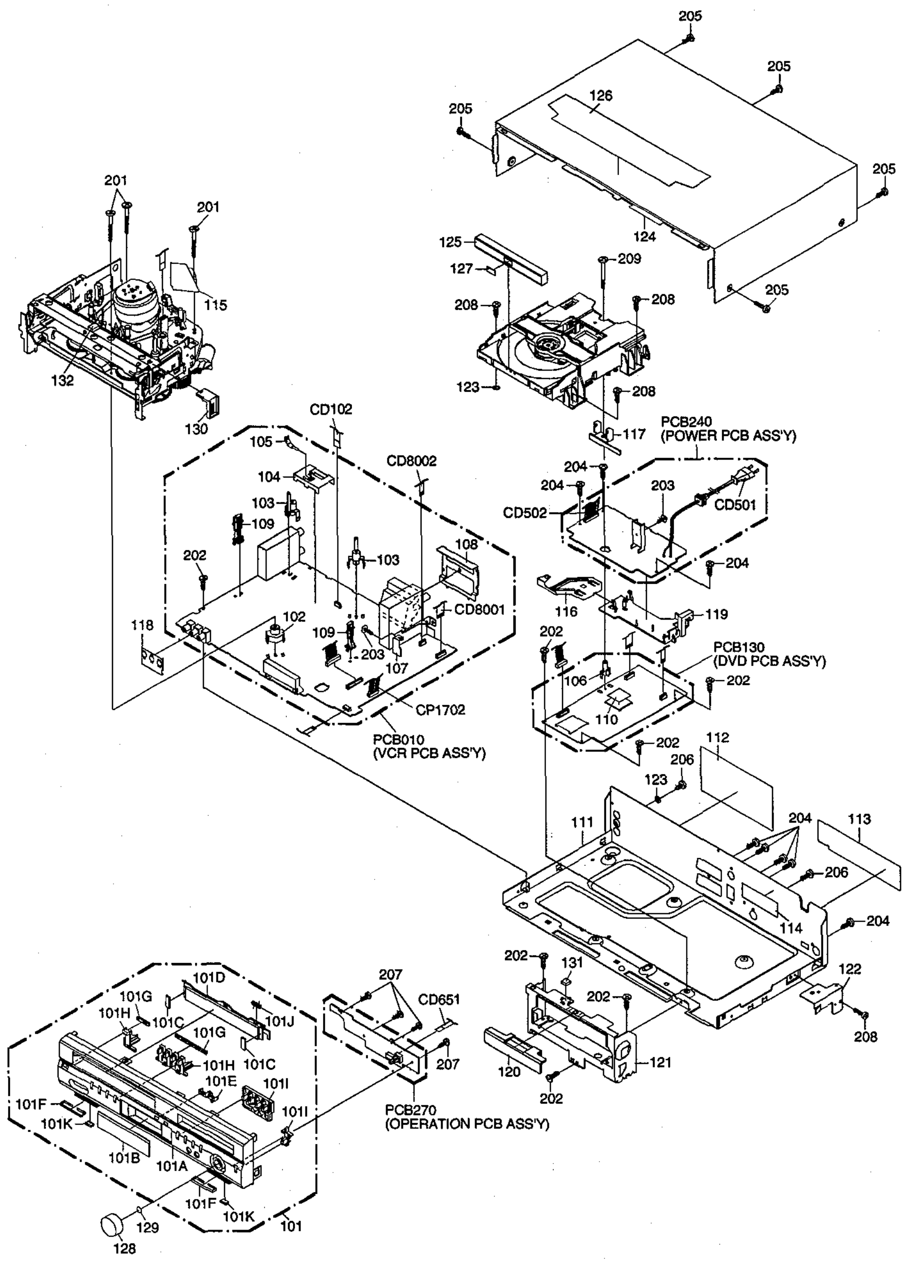
RE-WRITE FOR DVD FIRMWARE

1. Turn on the power, and set the DVD mode.
2. Confirm that the "No Disc" will be appeared on the screen.
3. Open the DVD tray.
4. Press both Channel button **(6)** on the remote control and the REC button on the set for more than 2 seconds.
5. Press OPEN/CLOSE button on the unit to check if all the keys on the unit do not function.
   NOTE: To check if DVD Write mode is set.
   Up-Date can be done at Non DVD Write mode. But the read error may occur.
6. Place the Up-Date Disc and close the tray by hand. **(Refer to SERVICING FIXTURE AND TOOLS)**
7. Automatic read will start and "Firmware upgrade" will be displayed on the screen.
8. Approxi. 60 seconds later, the tray will open automatically. Remove the Up-Date Disc.
9. Then, Approxi. 50 seconds later, the above indication will disappear and the tray will close automatically.
   When the "No Disc" appears on the screen, the write will end.
   NOTE: Do not turn off the unit on the way or push the tray by hand to close it.
   Up-Date error will happen and can not be done with the Up-Date of Up-Date Disc.
10. Unplug the AC cord, then plug it in.
11. **After the write, set to the initializing of shipping.**
    Set to the DVD mode, press both Channel button **(4)** on the remote control and the REC button on the set for more than 2 seconds.
    The "INITIALIZE 7 ---> COMPLETE" will appear on the screen.
12. Then unplug the AC cord, and plug it in.
13. **CHECK FOR THE FIRMWARE VERSION**
    Set to the DVD mode, press both Channel button **(1)** on the remote control and the STOP button on the set for more than 3 seconds.
    Firmware version will be displayed on the top left of the screen.
    When the changed version displays, the Re-write will be completed.
14. Turn off the power


No Disc
GMJ36101
G M J 3 6 1 0 1
Fixed
Released times on the same date
Release date (Example: 2003.6.10)
A = October
B = November
C = December

When the changed version displays, the Re-write will be completed.

EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL ⚠ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY ⚠, USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50 V and less than 1000 μF type of Ceramic type and Electrical type.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	645 064 3729	INSTRUCTION BOOK KIT
	645 064 4160	INSTRUCTION BOOK(SW)
	645 064 5099	CARTON,LABEL,M2D0-03 1
	645 054 7614	GIFT,SHEET,70 80 0.03 PE
	645 064 5235	PACKAGE,FRONT,M2D0 DVD/VR6
	645 064 5242	PACKAGE,BACK,M2D0 DVD/VR6
	645 064 5266	GIFT BOX,M2D0-03 WHITE 1000
	645 064 4078	POLYBAG,INSTRUCTION, FOR INSTRUCTION
	645 058 2028	POLYBAG,FOR ACCESSORY PA
	645 064 4108	INSTRUCTION BOOK(E)
	645 064 4115	QUICK SET-UP SHEET(E)
	645 064 4122	INSTRUCTION BOOK(G)
	645 064 4139	INSTRUCTION BOOK(I)
	645 064 4146	INSTRUCTION BOOK(S)
	645 064 4153	INSTRUCTION BOOK(D)
	645 064 4733	SATELLITE SPEAKER (DC,00/XE),SATELLITE SPEAKE
	645 064 4597	WIRE CUPA5002, L=1500MM FM ANT PAL 6.43
	645 058 2875	ANTENNA,LOOP 5M5000, 233MM AM LOOP SHELD 0.8M
	645 058 2547	CABLE PI04038, IN CABLE L=3000MM 105
	645 064 4559	RF CABLE PAL FTZ CDL, L=900MM FTZ
	645 064 4771	TRANSMITTER,RC-HJ

CABINET,CHASSIS and FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
101	645 064 3712	CABINET,FRONT ASSY
101A	645 064 4962	CABINET,FRONT
101B	645 064 4993	PLATE,DISPLAY
101C	645 058 2967	FLAP,SIDE,HOROME) 1
101D	645 064 5020	FLAT,FLAP
101E	645 058 2981	GLASS,LED
101F	645 058 3032	SHEET,LEG,NE TAPE
101G	645 058 3100	BUTTON,HOLDER
101H	645 058 3117	BUTTON,FRAME-VCR
101I	645 058 3124	BUTTON,FRAME-DVD
101J	645 054 7515	SPRING,FLAP,SHORT TYPE 0.5
101K	645 054 7683	CUSHION,LEG
102	645 054 7195	HOLDER,DECK,URAL CUT TYPE
103	645 054 7201	HOLDER,DECK
104	645 054 7522	SHIELD,CASE H/AMP
105	645 054 7560	SPRING,EARTH H/AMP
106	645 064 5174	HOLDER,DVD,MODIFY B
107	645 064 5198	ANGLE,PCB
108	645 064 5204	SHIELD,21PIN
109	645 056 6271	HOLDER,END SENSOR
110	645 064 5105	SHEET,IC, ICQK067680,ISE 6E) 5.1CH 0.1
111	645 064 4979	PLATE,BOTTOM,DVD/VR, VER PAL W/O COMPO 900
112	645 064 5051	SHEET,RATING
113	645 064 5075	SHEET,JACK
114	645 058 3087	SHEET,CAUTION,TED PAPER 2 74
115	645 054 7539	COVER,AC HEAD
116	645 064 5136	SHIELD,POEWR-PCB
117	645 064 5143	ANGLE,DVD 2
118	645 060 4430	SHIELD,3-PIN,/4H T=0.2
119	645 064 5150	PLATE,POWER COVER
120	645 064 5181	HOLDER,DISC
121	645 064 5211	ANGLE,FRONT,MODIFY
122	645 064 5228	ANGLE,DVD, SECC T=1,P PROGRESSIVE 10
123	645 064 5273	FIBER,WASHER 7*3.2*T, FIBER T=0.5 W/ADHESIVE 1
124	645 064 4986	CABINET,TOP,NO.117S
125	645 064 5006	PLATE,TRAY-FRONT
126	645 064 5129	POP,LABEL
127	645 051 4753	SHEET,DVD
128	645 058 3094	KNOB,ROTARY-VOL.
129	645 058 3131	SPRING,VOL,.2 D=7.1
130	645 064 5167	HOLDER,DECK TOP, HI-,HB NATURAL COLOR
131	645 061 2923	CUSHION(65TS10-10H L, W10/H10/L10 94V-0 0.125
132	645 064 5334	CUSHION(65TS10-10H L, W10/H10/L17.5 94V-0 0.
201	645 054 7812	SCREW,R PAN 3X29 CH,29 CH, DECK + PLATE,BOTTO
202	645 051 4869	SCREW,TAP TITE(B) R,7 CH, ANGLE,FRONT + BOT
203	645 051 4845	SCREW,TAP TITE(B) WH, IC + HEAT SINK,WASH
204	645 054 7829	SCREW, BIND 3X8 CH,8 CH, ANGLE,PCB + P,BOTTO
205	645 054 7799	SCREW,TAP TITE(B) BIND(3D,) 6 NI, TOP + PLATE,B
206	645 054 7775	SCREW, BIND 3X4 CH,4 CH,RF
207	645 056 8442	SCREW, BIND 2.6X8 CH,8 CH, PCB + C,FRONT
208	645 064 5280	SCREW,BIND M3*8 CH, CK + ANGLE,DECK FRONT,IN
209	645 064 5327	SCREW,TAP TITE(B) M3, DVD,DECK + ANGLE,DECK

ELECTRICAL-PARTS

REF.NO.	PART NO.	DESCRIPTION
CD102	645 056 8312	CORD JUMPER 2F061, 6PIN FFC L=150MM
CD8001	645 064 4887	CORD JUMPER 2F0C060, 10MM 12PIN TL=60MM FFC 0.
CD8002	645 064 4894	CORD JUMPER 2F05160, 125MM 5PIN TL=160MM FFC 0
TU302	⚠ 645 064 4382	TUNER FAE410-E03, AM/,DIO TUNER UNIT M2D0 90

VCR.P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
PCB010	614 328 6387	ASSY,PWB,VCR,TS3000XE (Only initial)
C106	645 064 4177	CMP MMTV100J223 0.02, 100V MMTV
C108	645 051 2452	CC RHTP050F103Z-AB,25V F, 5MM PITCH TAPING
C121	645 051 2452	CC RHTP050F103Z-AB,25V F, 5MM PITCH TAPING
C145	645 064 3835	SCREW,TAP TITE(B) R
C306	645 054 4996	CE 1000 UF 6.3V,P=5MM 1.2
C5206	645 064 3767	CC UP050F473Z-A-BZ 0, 50V F,TAPING 3. 2.2
C5208	645 064 3767	CC UP050F473Z-A-BZ 0, 50V F,TAPING 3. 2.2
C5220	645 064 3835	SCREW,TAP TITE(B) R
C7021	645 064 3835	SCREW,TAP TITE(B) R
C7022	645 064 3835	SCREW,TAP TITE(B) R
C822	645 059 5608	CC UP050CH470J-A-BZ,50V
CP101	645 054 6914	CONNECTOR PCB SIDE, 9X-A1,9PIN CYL HEAD-SYSC
CP102	645 064 4672	CONNECTOR PCB SIDE I, 604S-06C,6PIN 1.25MM FFC
CP103	645 059 5851	WIRE HOLDER B2013H0, 22PIN 2.0MMPITCH 1.5
CP1701	645 064 4696	CONNECTOR PCB SIDE A,V2-14P, 14PIN P=2.0MM STR
CP1702	645 064 4573	CORD JUMPER CH2A030, 110PIN P=2MM L=35MM 2.2
CP3001	645 054 6907	CONNECTOR PCB SIDE,2P-B2, 12PIN CAPATAN TO S
CP651	645 064 4658	CONNECTOR PCB SIDE I, 615S-08C-PP,8PIN 1MM FFC
CP653	645 058 2707	CONNECTOR PCB SIDE,100, 1 PIN 2.36 PHAI 0.50
CP7002	645 058 2592	JACK MD24-,9PIN 5.1CH JACK 4.3
CP8001	645 064 4641	CONNECTOR PCB SIDE 1, P=1MM FFC CONNECTOR 0.43
CP8002	645 064 4665	CONNECTOR PCB SIDE I, 604S-05C,5PIN 1.25MM FFC
CP8003	645 064 4719	CONNECTOR PCB SIDE T, 1P-B1,11PIN P=2MM BOARD
D101	645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
D102	645 058 1687	DIODE,ZENER,MTZJ6.8B, PC=0.5W TAPING CATH-BAN
D1703	645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
D1704	645 058 1656	DIODE,ZENER,MTZJ12B, PC=0.5W TAPING CATH-BAND
D1705	645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
D1706	645 058 1656	DIODE,ZENER,MTZJ12B, PC=0.5W TAPING CATH-BAND
D1707	645 054 4903	DIODE,ZENER MTZJ10B, PC=0.5W TAPING CATH-BAND
D1708	645 054 4958	DIODE,ZENER,MTZJ33B, PC=0.5W TAPING 0.04
D1709	645 056 4963	DIODE,ZENEER,MTZJ3.3, PC=0.5W TAPING CATH-BAN
D1710	645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
D1711	645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
D1713	645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
D1715	645 058 1663	DIODE,ZENER,MTZJ24B, PC=0.5W TAPING CATH-BAND
D1716	645 051 2810	DIODE,SILICON 1N4005-EIC, 52MM TAPING VRMS=420V IO
D1717	645 051 2810	DIODE,SILICON 1N4005-EIC, 52MM TAPING VRMS=420V IO
D1718	645 051 2810	DIODE,SILICON 1N4005-EIC, 52MM TAPING VRMS=420V IO
D3001	645 059 5783	INFRARED LED,2A-O, CENTER LED TAPING
D3002	645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
D657	645 058 1670	DIODE,ZENER,MTZJ5.1C, PC=0.5W TAPING CATH-BAN
D7001	645 064 3903	DIODE,ZENER,PC=0.5W, PC=0.5W TAPING CATH-BAN
D7002	645 064 3903	DIODE,ZENER,PC=0.5W, PC=0.5W TAPING CATH-BAN
D8001	645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
D8004	645 064 3897	DIODE,ZENER MTZJ6.2B, PC=0.5W TAPING
D8007	645 064 3897	DIODE,ZENER MTZJ6.2B, PC=0.5W TAPING
D8011	645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
D8012	645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
IC101	645 064 4016	IC HA118225F,Y/C/A/C, AMP 1CHIP 1.7
IC1701	645 064 4047	IC KIA78R09API, REGULATOR 9V 1A 2.0
IC3001	645 064 4061	IC OEC7099A,2003 EU, CR RECEIVER 5.0
IC3002	645 064 3965	IC XC61CN3102SR, RESET IC 3.1V TYPE 0.015
IC3003	645 058 1991	IC OEC7082A,CR RECEIVER UART
IC3099	645 064 3682	IC S-24C16AFJA-TB-01, CMOS2 16K EEPROM 0.4
IC5201	645 058 1885	IC NJM4580V(TE1), ERATION AMP 0.042
IC5202	645 058 1885	IC NJM4580V(TE1), ERATION AMP 0.042
IC5203	645 064 4023	IC M65857FP, Q-SURROUND 5.1CH 0.53
IC651	645 058 1854	IC PT6315,4PIN-LQFP 0.67
IC7001	645 064 4030	IC BD3813KS,6CH VOLUME 0.53
IC7002	645 058 1885	IC NJM4580V(TE1), ERATION AMP 0.042
IC7003	645 058 1885	IC NJM4580V(TE1), ERATION AMP 0.042
IC7006	645 058 1885	IC NJM4580V(TE1), ERATION AMP 0.042
IC7007	645 058 1885	IC NJM4580V(TE1), ERATION AMP 0.042
IC701	645 059 5653	IC LA72646SM-MPB HIFI/AUDIO/CANAL SW IC 1.2
IC8001	645 064 4009	IC LA73026AV-TLM-E,2, SELECT W/ELECTROSTATIC 0
IC8002	645 064 3996	IC MM1501XNRE,A/V SW, UT 1OUTPUT 0.016
IC8003	645 064 3996	IC MM1501XNRE,A/V SW, UT 1OUTPUT 0.016
IC8004	645 064 3996	IC MM1501XNRE,A/V SW, UT 1OUTPUT 0.016
IC801	645 064 3989	IC TDA9874AH, NICAM DECODER 1.6
J651	645 058 2578	RCA JACK MSP-281V3-, 1PIN AV JACK W/SWITCH
J652	645 058 2561	RCA JACK MSP-281V1-, 1PIN AV JACK WHITE
J653	645 058 2554	RCA JACK MSP-281V4-, 1PIN AV JACK YELLOW
J8004	645 064 4627	SOCKET,21PIN 035_0_8,0, 21PIN SOCKE 2
L101	645 051 4296	COIL 22UH,SERIES 0.12
L102	645 064 4498	COIL,BIAS OSC 161600, BIAS 70KHZ VCC=5.8V 1.4
L103	645 054 6570	COIL 100 UH,5 SERIES 0.13
L104	645 054 6570	COIL 100 UH,5 SERIES 0.13
L105	645 064 4436	COIL LAP02TA820K 82, TAPING 5MM TYPE 0.06

REF.NO.	PART NO.	DESCRIPTION
L107	645 064 4436	COIL LAP02TA820K 82, TAPING 5MM TYPE 0.06
L108	645 051 4296	COIL 22UH,SERIES 0.12
L109	645 054 6518	COIL LAP02TA120K 12, TAPING 5MM TYPE 0.10
L110	645 064 4429	COIL LAP02TA390K 39, TAPING 5MM TYPE 0.10
L111	645 054 6570	COIL 100 UH,5 SERIES 0.13
L112	645 051 4296	COIL 22UH,SERIES 0.12
L1702	645 054 6594	COIL 100 UH,Q=45 TAPE 0.20
L1703	645 058 2424	COIL 22 UH,TAPING Q=20
L1704	645 054 6556	COIL TSL0808RA-220K1,UH, TAPING P=5MM I=1.9A
L1705	645 054 6594	COIL 100 UH,Q=45 TAPE 0.20
L3002	645 058 2417	COIL LAP02TA2R2K, TAPING 5MM TYPE
L3004	645 058 2400	COIL LAP02TA101K, TAPING 5MM TYPE 0.10
L301	645 054 6594	COIL 100 UH,Q=45 TAPE 0.20
L5201	645 054 6570	COIL 100 UH,5 SERIES 0.13
L651	645 058 2394	COIL LAP02TA100K, TAPING 5MM TYPE 0.1
L652	645 058 2394	COIL LAP02TA100K, TAPING 5MM TYPE 0.1
L7001	645 051 4296	COIL 22UH,SERIES 0.12
L701	645 051 4296	COIL 22UH,SERIES 0.12
L702	645 051 4296	COIL 22UH,SERIES 0.12
L703	645 051 4296	COIL 22UH,SERIES 0.12
L8003	645 051 4296	COIL 22UH,SERIES 0.12
L8004	645 051 4296	COIL 22UH,SERIES 0.12
L8013	645 054 6570	COIL 100 UH,5 SERIES 0.13
L8014	645 058 2394	COIL LAP02TA100K, TAPING 5MM TYPE 0.1
L8015	645 064 4443	COIL 1 UH,TAPING Q=50 AXIAL
L8016	645 058 2394	COIL LAP02TA100K, TAPING 5MM TYPE 0.1
L801	645 051 4296	COIL 22UH,SERIES 0.12
OS651	645 064 4788	REMOTE RECEIVER PIC-, LO-H,VCC=MAX5.5V H=18.3M
Q101	645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE H
Q102	645 051 4104	TRANSISTOR,KTC3203 Y-AT, 03_Y-AT,VCBO=35V,IC=800M
Q1710	⚠ 645 056 5601	TR KTB1366(O,Y), VCBO=-60V IC=-3A
Q1711	⚠ 645 055 4551	TR KTA1504S,4S_Y_RTK, CHIP SMT HFE=12
Q1712	645 054 6372	TRANSISTOR DTC124EKAT146, 4EKAT146,TAPING SMT TYPE
Q1713	645 054 6372	TRANSISTOR DTC124EKAT146, 4EKAT146,TAPING SMT TYPE
Q1714	⚠ 645 054 6341	TR KTC3209_Y-AT,9_Y-AT, TAPING HFE=120-24
Q1715	⚠ 645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE H
Q1716	645 054 6389	COMP KRA103SRTK,3SRTK, CHIP R1=22K R2=22K
Q1717	645 054 6372	TRANSISTOR DTC124EKAT146, 4EKAT146,TAPING SMT TYPE
Q1718	⚠ 645 051 4074	TRANSISTOR,KTA1281 Y,1_Y, IC=-2A PC=1W HFE=120
Q1720	⚠ 645 064 4368	TRANSISTOR SILICON K,1Y, VCBO=60V IC=5A PC=20W
Q1721	⚠ 645 054 6341	TR KTC3209_Y-AT,9_Y-AT, TAPING HFE=120-24
Q2601	645 051 4197	TRANSISTOR SILI.2SA1036K, 6KT146,CHIP SMT TYPE
Q2602	645 051 4197	TRANSISTOR SILI.2SA1036K, 6KT146,CHIP SMT TYPE
Q2603	645 051 4173	FET,2SK3018, VDSS=30V ID=0.1A PD=0.2W
Q2604	645 051 4173	FET,2SK3018, VDSS=30V ID=0.1A PD=0.2W
Q2605	645 051 4173	FET,2SK3018, VDSS=30V ID=0.1A PD=0.2W
Q3001	645 056 5625	PHOTO TR ST-304L, BOT/EOT SENSER H=47.5MM
Q3002	645 056 5625	PHOTO TR ST-304L, BOT/EOT SENSER H=47.5MM
Q3003	645 054 6419	PHOTO COUPLER RPI-35, MODE SENSOR 0.18
Q3006	645 054 6419	PHOTO COUPLER RPI-35, MODE SENSOR 0.18
Q3008	645 054 6426	PHOTO COUPLER RPI-30, REEL SENSOR 0.71
Q3009	645 054 6426	PHOTO COUPLER RPI-30, REEL SENSOR 0.71
Q3010	645 054 6372	TRANSISTOR DTC124EKAT146, 4EKAT146,TAPING SMT TYPE
Q3012	645 064 4375	COMPOUND TRANSISTOR, 4EKAT146,TAPING SMT TYPE
Q3013	645 054 6372	TRANSISTOR DTC124EKAT146, 4EKAT146,TAPING SMT TYPE
Q501	⚠ 645 059 5769	TRANSISTOR FIELD EFF, SK2651-01MR,VDSS=900V,ID
Q5502	645 062 6555	COMPOUND TRKRC102MAT, 2MAT,TAPING R1=10K R2=10
Q5504	645 051 4098	TRANSISTOR,KTC3198-AT(Y, G,8-AT(Y,GR),TAPING HFE 12
Q5505	645 051 4098	TRANSISTOR,KTC3198-AT(Y, G,8-AT(Y,GR),TAPING HFE 12
Q5506	645 051 4098	TRANSISTOR,KTC3198-AT(Y, G,8-AT(Y,GR),TAPING HFE 12
Q5507	645 051 4098	TRANSISTOR,KTC3198-AT(Y, G,8-AT(Y,GR),TAPING HFE 12
Q5508	645 058 2356	COMP TR KRA102MAT, 2MAT,TAPING R1=10K R2=10
Q5509	645 051 4098	TRANSISTOR,KTC3198-AT(Y, G,8-AT(Y,GR),TAPING HFE 12
Q5512	645 051 4098	TRANSISTOR,KTC3198-AT(Y, G,8-AT(Y,GR),TAPING HFE 12
Q5513	645 051 4098	TRANSISTOR,KTC3198-AT(Y, G,8-AT(Y,GR),TAPING HFE 12
Q5515	645 051 4098	TRANSISTOR,KTC3198-AT(Y, G,8-AT(Y,GR),TAPING HFE 12
Q5517	645 051 4098	TRANSISTOR,KTC3198-AT(Y, G,8-AT(Y,GR),TAPING HFE 12
Q8001	645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE H
Q8002	645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE H
Q8003	645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE H
Q8010	645 055 4582	TRANSISTOR DTC144E, 4EKAT146,TAPING SMT TYPE
Q8015	645 055 4599	TRANSISTOR DTA114E, 4EKAT146,TAPING SMT TYPE
Q8016	645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE H
Q8018	645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE H
R1704	⚠ 645 064 4245	R,METAL OXIDE 100 OH, L-FORMING P=20MM
R1719	⚠ 645 058 2189	R,FUSE 330 OHM 1/2,1/2W, SELF STAND P=12.5M
R1729	⚠ 645 064 4252	R,FUSE RF25SVTP102J, M 1/4W,RADIAL TYPE TAPIN
SW3001	645 056 8220	SWITCH (LEAF) LSA-, OVD-7 REC SAFETY SWITCH
SW651	645 051 4357	SWITCH,TACT,6 H5 2 (160G)
SW652	645 051 4357	SWITCH,TACT,6 H5 2 (160G)
SW653	645 051 4357	SWITCH,TACT,6 H5 2 (160G)
SW654	645 051 4357	SWITCH,TACT,6 H5 2 (160G)
SW655	645 051 4357	SWITCH,TACT,6 H5 2 (160G)
TU301	⚠ 645 064 4399	RF UNIT TCMB0601PD13, PAL B/G STEREO 83.9

REF.NO.	PART NO.	DESCRIPTION
V651	645 058 2745	TUBE FLUORESCENT,HNV-07SS46, TUBE FLUORESC
X101	645 064 4832	CRYSTAL AT-49, F=4.433619MHZ H=3MM 0.52
X3001	645 054 6990	CRYSTAL,CL=12.5PF 0.60
X3002	645 058 2776	CRYSTAL,F=12MHZ H=5MM 0.6
X3003	645 058 2806	CERAMIC OSCILLATOR, 4MHZ TAPING TYPE-M
X801	645 064 4825	CRYSTAL,F=24.576MHZ NICAM 1.00

DVD P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
PCB130	614 328 6394	ASSY,PWB,DVD,TS3000XE (Only initial)
B2601	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B2602	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B2603	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B2604	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B2605	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B4001	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B4002	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B4003	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B4004	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B4005	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B4006	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B4007	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B4008	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B7301	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
B7302	645 051 4302	CORE,BEADS FCM2012H-102T0,4, 1000OHM TAPING(21-25)
C2301	645 051 2742	CC 0.1UF 25V F,C-TAPING (16-08)
CP2601	645 064 4634	CONNECTOR PCB SIDE , 20.5MM FFC CONNECTOR 0.29
CP2602	645 055 4650	CONNECTOR PCB SIDE 0, 1.0MM FFC CONNECTOR 0.27
CP2603	645 064 4702	CONNECTOR PCB SIDE A, V2-3P,3PIN P=2.0MM STRAI
CP4002	645 064 4689	CONNECTOR PCB SIDE A, V2-10P,10PIN P=2.0MM STR
CP8101	645 064 4665	CONNECTOR PCB SIDE I, 604S-05C,5PIN 1.25MM FFC
CP8102	645 064 4641	CONNECTOR PCB SIDE 1, P=1MM FFC CONNECTOR 0.43
D2601	645 055 4049	DIODE SILICON KDS120, TAPING VR=80V IO=100MA
D8102	645 055 4063	DIODE SILICON MCL4148, TAPING VR=75V IO=150MA
IC2301	645 055 4155	IC LA6560, 5CH MOTOR DRIVER IC 0.95
IC2601	645 064 3941	IC ZR36707TQC, READ CHANNEL 64PIN 0.35
IC2602	645 058 1946	IC BA10358F-E2, DUAL OPAMP E2TAPING 0.1
IC4001	645 064 3958	IC ZR36768,DVD MPEG/, DSP 6CH 5.427
IC4002	645 055 4162	IC S-24C04BFJ-TB, EEPROM 4K SOP8 0.4
IC4003	645 055 4148	IC PQ070XZ01ZP,IO=1A TAPING 0.3
IC4005	645 064 3972	IC M12L64164A-7T,1M*, ANK SDRAM TSOP54 0.56
IC4007	645 055 4117	IC SST39VF800A-70-4C, FLASH MEMORY 8M(512 16)
IC7302	645 058 1953	IC PCM1602Y,24BIT 192KHZ
J8101	645 054 6761	JACK,S-VHS JACK
L4001	645 051 4289	COIL 2.2UH, Q=50 TAPE 0305 SERIES
L8101	645 064 4481	COIL 1 UH,Q=50 TAPE 0305 SERIES
L8102	645 064 4481	COIL 1 UH,Q=50 TAPE 0305 SERIES
L8103	645 064 4481	COIL 1 UH,Q=50 TAPE 0305 SERIES
L8104	645 064 4481	COIL 1 UH,Q=50 TAPE 0305 SERIES
L8105	645 064 4474	COIL 0.33 UH, Q=20 TAPE 0305 SERIES
L8106	645 064 4474	COIL 0.33 UH, Q=20 TAPE 0305 SERIES
SW8101	645 055 4612	SWITCH SLIDE SK42H0I, SLIDE SW 4POLE-2THROW 5.4
X4001	645 058 2769	CRYSTAL HC-49U/S, +-15PPM TAPING 0.68

POWER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
PCB240	614 328 6400	ASSY,PWB,POWER,TS3000XE (Only initial)
B501	645 054 6600	CORE,BEADS,X2, 3.6.0 DUAL RADIAL 5
B503	645 054 6617	CORE,BEADS, 3.6.0 RADIAL 5MM 0.4
C501	⚠ 645 058 2066	CMP 0.1 UF 275V E,UL CSA 1.50
C502	645 064 3750	CC UP050B223K-A-BZ 0, 50V B,TAPING 3. 2.2
C503	645 064 3774	CC UP050F474Z-A-BZ 0, 50V F,TAPING 3. 2.2
C508	645 058 1595	CC SPECIAL 0.01 UF
C511	⚠ 645 058 1359	CC 0.0022UF 250V,2UF 250V, KX TYPE SHORT C
C514	645 064 3934	CE 400PK47MKC 47 UF, PK SERIES FORMING 1 25
C516	⚠ 645 059 5592	CC DE1E3KX152MB5BA0,5UF 250V, KX TYPE SHORT C
C521	645 055 4070	CE 2200 UF 25V,FORMING 12. 25
C523	645 051 2902	CE 2200UF 6.3V, TAPING 1 16 P=5MM
CD501	⚠ 645 064 4856	CORD AC BUSH 0G45980, 5.4FEET L=190 FOR G 78
CD502	645 064 4610	CORD CONNECTOR CU2E2, 14PIN L=220MM 8.6
D504	645 058 1632	DIODE,1N4937, 600V IO=1A IFSN=30A 0.23
D505	645 058 1625	DIODE,11E1-EIC, PRV=100V IO=1.0A 0.339
D506	645 058 1625	DIODE,11E1-EIC, PRV=100V IO=1.0A 0.339
D507	645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
D508	⚠ 645 051 2810	DIODE,SILICON 1N4005-EIC, 52MM TAPING VRMS=420V IO
D509	⚠ 645 051 2810	DIODE,SILICON 1N4005-EIC, 52MM TAPING VRMS=420V IO
D510	⚠ 645 051 2810	DIODE,SILICON 1N4005-EIC, 52MM TAPING VRMS=420V IO
D511	⚠ 645 051 2810	DIODE,SILICON 1N4005-EIC, 52MM TAPING VRMS=420V IO
D512	645 058 1618	DIODE,SARS01-V1, TAPING 52MM VRM=800 IF=1.
D514	⚠ 645 059 5141	DIODE SCHOTTKY, 2B1,VRRM=90,IO=1.7,SOLDE
D515	⚠ 645 054 4880	RECTIFER,10ELS6N-TA1,1B2, VRRM=600,I0=1A,SOLDE
D516	⚠ 645 054 4880	RECTIFER,10ELS6N-TA1,1B2, VRRM=600,I0=1A,SOLDE
D517	⚠ 645 061 0653	DIODE SCHOTTKY 21DQ0,2B1, VRM=40,IO=1.7,SOLDER

REF.NO.	PART NO.	DESCRIPTION
D518	⚠ 645 054 4859	DIODE SCHOTTKY,SB340,7, VRM=40V,IO=3A 15MM FOR
D519	⚠ 645 054 4880	RECTIFER,10ELS6N-TA1,1B2, VRRM=600,I0=1A,SOLDE
D522	⚠ 645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
D533	⚠ 645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
EL001	645 059 5929	EYE LET XRY20X30BD, 2.3.0 MM D=3.3MM 0.5
F501	645 059 5875	FUSE 50T025H,V UL/SEMCO/VDE 1
FH501	645 051 4432	HOLDER,FUSE, 250V 10A TAPING 0.60
FH502	645 051 4432	HOLDER,FUSE, 250V 10A TAPING 0.60
IC501	⚠ 645 058 1892	IC TEA1507P/N1, POWER CONTROL 0.47
IC502	⚠ 645 051 3305	IC KIA431,REGULATOR TAPE 0.19
IC504	⚠ 645 059 5776	PHOTO COUPLER,V(W), 4PIN CTR 130-260% 0
L501	⚠ 645 051 4333	COIL,LINE FILT.0R3A433F20, L=43MH AC=250V 10.18
L502	645 064 4412	CORE,FERRITE,4, FERRITE TROIDAL CORE
L506	645 064 4412	CORE,FERRITE,4, FERRITE TROIDAL CORE
Q103	645 064 4375	COMPOUND TRANSISTOR, 4EKAT146,TAPING SMT TYPE
R509	⚠ 645 059 5738	R,METAL OXIDE 0.56 O, FORMING P=15MM
R511	⚠ 645 054 5672	R,FUSE 0.22 OHM 1W, 1W,SELF STAND P=15 H=
R513	⚠ 645 064 4276	R,FUSE RNF25RR33J 0., 1/4W,SELF STAND P=10MM
R515	⚠ 645 058 2158	R,METAL 10 OHM 1W, FORMING P=15MM 0.62
R516	645 054 5665	R,METAL MF-1/6W332F, .3K OHM 1/6W,TAPING +-1%
R517	645 054 5665	R,METAL MF-1/6W332F, .3K OHM 1/6W,TAPING +-1%
R534	⚠ 645 058 2172	R,FUSE 33 OHM 1W, SELF STAND P=15 H=5.
T501	⚠ 645 064 4511	TRANSFORMER,SWITCHIN, 91174,DVD/VR W/RECEIVER

OPERATION P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
PCB270	614 328 6417	ASSY,PWB,OPERATI,TS3000XE (Only initial)
CD651	645 064 4900	CORD JUMPER 2F081008, 8PIN TL=100MM FFC 0.
CP601	645 064 4658	CONNECTOR PCB SIDE I, 615S-08C-PP,8PIN 1MM FFC
D601	645 054 6464	LED LTL-1CHGE-002A, GREEN TAPING
D602	645 054 6464	LED LTL-1CHGE-002A, GREEN TAPING
SW601	645 058 2479	SWITCH, EVE_LE1_F20_,0_24B, ROTARY ENCORDER 2.
SW602	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM
SW603	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM
SW604	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM
SW605	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM
SW606	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM
SW607	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM
SW608	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM

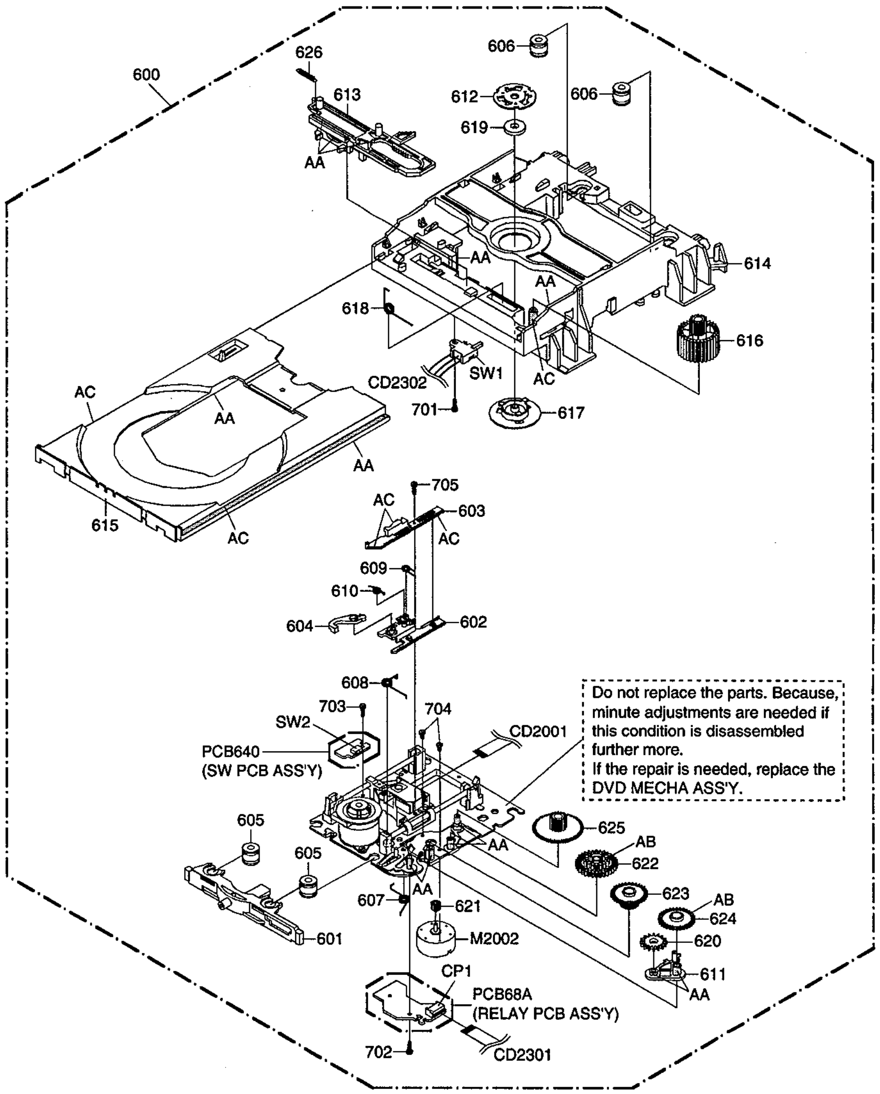
PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
D518	⚠ 645 054 4859	DIODE SCHOTTKY,SB340,7, VRM=40V,IO=3A 15MM FOR
D519	⚠ 645 054 4880	RECTIFER,10ELS6N-TA1,1B2, VRRM=600,I0=1A,SOLDE
D522	⚠ 645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
D533	⚠ 645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130M
EL001	645 059 5929	EYE LET XRY20X30BD, 2.3.0 MM D=3.3MM 0.5
F501	645 059 5875	FUSE 50T025H,V UL/SEMCO/VDE 1
FH501	645 051 4432	HOLDER,FUSE, 250V 10A TAPING 0.60
FH502	645 051 4432	HOLDER,FUSE, 250V 10A TAPING 0.60
IC501	⚠ 645 058 1892	IC TEA1507P/N1, POWER CONTROL 0.47
IC502	⚠ 645 051 3305	IC KIA431,REGULATOR TAPE 0.19
IC504	⚠ 645 059 5776	PHOTO COUPLER,V(W), 4PIN CTR 130-260% 0
L501	⚠ 645 051 4333	COIL,LINE FILT.0R3A433F20, L=43MH AC=250V 10.18
L502	645 064 4412	CORE,FERRITE,4, FERRITE TROIDAL CORE
L506	645 064 4412	CORE,FERRITE,4, FERRITE TROIDAL CORE
Q103	645 064 4375	COMPOUND TRANSISTOR, 4EKAT146,TAPING SMT TYPE
R509	⚠ 645 059 5738	R,METAL OXIDE 0.56 O, FORMING P=15MM
R511	⚠ 645 054 5672	R,FUSE 0.22 OHM 1W, 1W,SELF STAND P=15 H=
R513	⚠ 645 064 4276	R,FUSE RNF25RR33J 0., 1/4W,SELF STAND P=10MM
R515	⚠ 645 058 2158	R,METAL 10 OHM 1W, FORMING P=15MM 0.62
R516	645 054 5665	R,METAL MF-1/6W332F, .3K OHM 1/6W,TAPING +-1%
R517	645 054 5665	R,METAL MF-1/6W332F, .3K OHM 1/6W,TAPING +-1%
R534	⚠ 645 058 2172	R,FUSE 33 OHM 1W, SELF STAND P=15 H=5.
T501	⚠ 645 064 4511	TRANSFORMER,SWITCHIN, 91174,DVD/VR W/RECEIVER

OPERATION P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
PCB270	614 328 6417	ASSY,PWB,OPERATI,TS3000XE (Only initial)
CD651	645 064 4900	CORD JUMPER 2F081008, 8PIN TL=100MM FFC 0.
CP601	645 064 4658	CONNECTOR PCB SIDE I, 615S-08C-PP,8PIN 1MM FFC
D601	645 054 6464	LED LTL-1CHGE-002A, GREEN TAPING
D602	645 054 6464	LED LTL-1CHGE-002A, GREEN TAPING
SW601	645 058 2479	SWITCH, EVE_LE1_F20_,0_24B, ROTARY ENCORDER 2.
SW602	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM
SW603	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM
SW604	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM
SW605	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM
SW606	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM
SW607	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM
SW608	645 059 5219	SWITCH TACT EVQ11L05, TACT H=5MM 160 GRAM

EXPLODED VIEW (DVD MECHANISM)



Do not replace the parts. Because, minute adjustments are needed if this condition is disassembled further more.
If the repair is needed, replace the DVD MECHA ASS'Y.

CLASS	PART NO.	PART NAME	MARK
GREASE	Y315061000	G-555G	AA
	Y315121000	G-337F	AB
	Y315131000	SF-112	AC

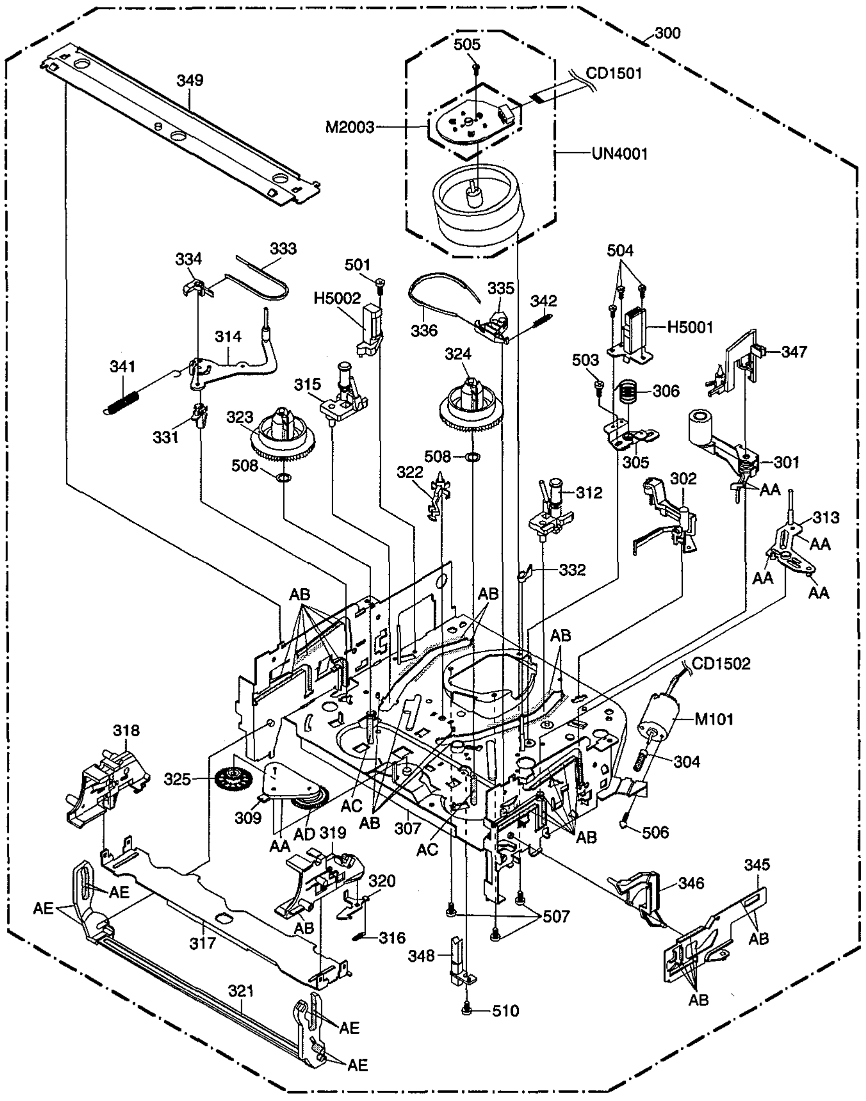
NOTE: Applying positions AA, AB and AC for the grease are displayed for this section.
Check if the correct grease is applied for each position.

PARTS LIST

DVD MECHANISM

REF.NO.	PART NO.	DESCRIPTION
600	645 064 3460	DVD MECHA ASSY
601	645 064 5389	TRAVERSE HOLDER
602	645 064 5488	RACK,FEED 1
603	645 064 5495	RACK,FEED 2
604	645 064 5501	LEVER,RACK FEED
605	645 064 5518	INSULATOR(F)
606	645 064 5525	INSULATOR(R)
607	645 064 5570	SPRING,CHASSIS
608	645 064 5549	SPRING,ARM IDLER
609	645 064 5556	SPRING,RACK FEED 2
610	645 064 5563	SPRING,RACK FEED 1
611	645 064 5471	ARM,IDLER
612	645 064 5341	CLAMPER PLATE
613	645 064 5358	RACK,LOADING
614	645 064 5365	MAIN FRAME M
615	645 064 5372	TRAY
616	645 064 5396	GEAR,MAIN
617	645 064 5402	CLAMPER
618	645 064 5532	SPRING,RACK LOADING
619	645 064 5594	MAGNET,CLAMPER
620	645 064 5464	GEAR,IDLER
621	645 064 5419	GEAR,MOTOR
622	645 064 5426	GEAR,MIDDLE 1
623	645 064 5433	GEAR,MIDDLE 2
624	645 064 5440	GEAR,MIDDLE 3
625	645 064 5457	GEAR,FEED
626	645 064 5587	SPRING,RACK L
701	645 056 8442	SCREW, BIND 2.6X8 CH, 8 CH,LEVER SW
702	645 064 5303	SCREW,TAP TITE(P) PA,CH, RELAY PCB
703	645 064 5297	SCREW,TAP TITE(S) BI,5 CH,PCB
704	645 064 5310	SCREW,PAN M1.7*2.5 P
705	645 061 2855	SCREW,TAP TITE(P) BI,8 CH, RACK FEED
CD2001	645 064 4917	CORD JUMPER 2H0O1901, IN TL=190MM P=0.5MM FFC
CD2301	645 064 4924	CORD JUMPER 2H080701, IN TL=70MM P=1.0MM FFC 0.
CD2302	645 064 4580	CORD CONNECTOR CH232, P=2MM 3PIN L=210MM 1.6
CP1	645 064 4658	CONNECTOR PCB SIDE I, 615S-08C-PP,,8PIN 1MM FF
M2002	X645 064 4948	FEED MOTOR BCD3B81, 80RPM CW/CCW 16.1
PCB640	645 064 3736	PCB VEBA17A,DM-2 SW, PCB MAT=C 0.4
PCB68A	645 064 3743	PCB VEBA12A,DM-2 RE, CB MAT=C 1.7
SW1	645 064 4535	SWITCH SSS-23-6,DM-, ECT SWITCH 1.15
SW2	645 064 4528	PUSH SWITCH ESE22MH2

EXPLODED VIEW (VCR MECHANISM TOP VIEW)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CD1501
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M2003
UN4001
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H5002
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H5001
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AA
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332
AA
AA
AB
AB
AB
CD1502
M101
318
304
325
AC
309
AB
307
506
AD
319
AA
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AB
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AE
AE
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316
AB
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321
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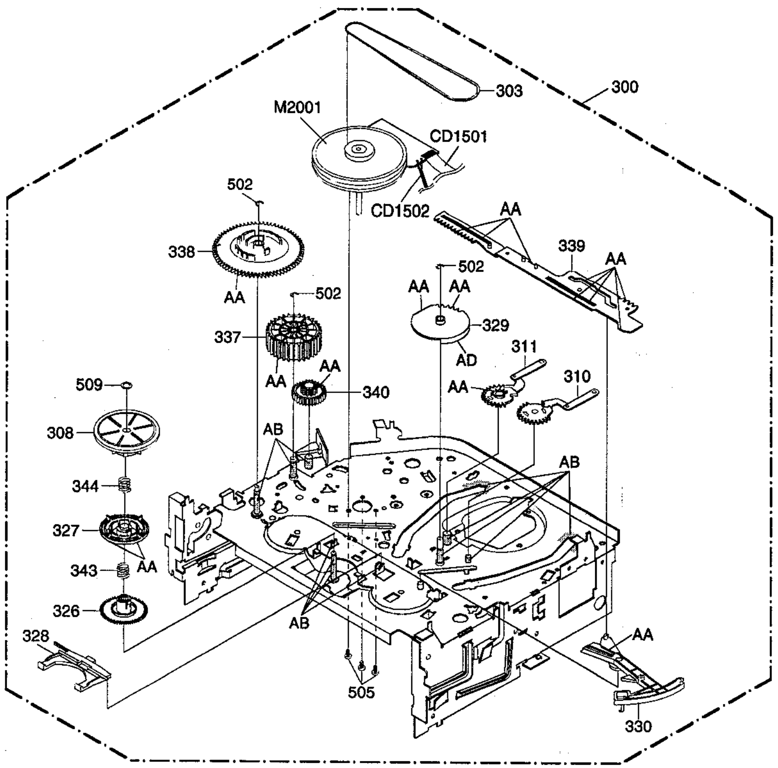
AB
AE
AE

CLASS	PART NO.	PART NAME	MARK
GREASE	Y315061000	G-555G	AA
	Y315071000	MG-33	AB
	Y31D011000	FG-84M	AC
	Y315041000	FL-721	AD
	Y315141000	G-313Y	AE

NOTE: Applying positions AA, AB, AC, AD and AE for the grease are displayed for this section. Check if the correct grease is applied for each position.

EXPLODED VIEW (VCR MECHANISM BOTTOM VIEW)



CLASS	PART NO.	PART NAME	MARK
GREASE	Y315061000	G-555G	AA
	Y315071000	MG-33	AB
	Y31D011000	FG-84M	AC
	Y315041000	FL-721	AD
	Y315141000	G-313Y	AE

NOTE: Applying positions AA, AB, AC, AD and AE for the grease are displayed for this section. Check if the correct grease is applied for each position.

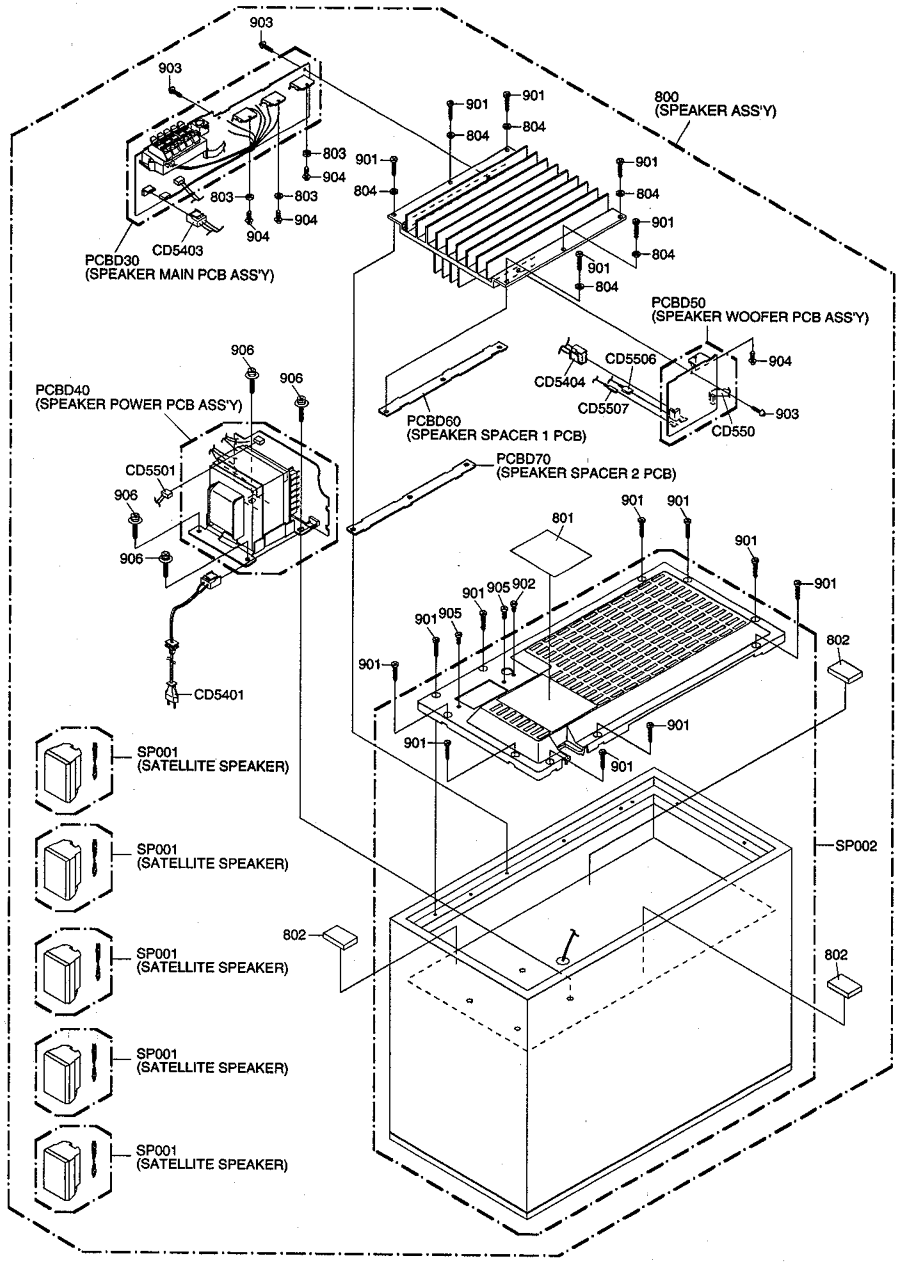
PARTS LIST

VCR MECHANISM

REF.NO.	PART NO.	DESCRIPTION
300	645 064 3583	DECK ASSY
301	645 054 7959	PINCH ROLLER BLOCK
302	645 054 7973	AHC ASS'Y
303	645 054 8000	BELT,CAPSTAN (S)
304	645 054 8185	WORM,(LEFT)
305	645 054 8130	BASE,AC HEAD
306	645 054 8246	SPRING,AC HEAD
307	645 054 7874	MAIN CHASSIS ASS'Y
308	645 054 7881	CLUTCH ASS'Y
309	645 054 7898	ARM IDLER ASS'Y
310	645 054 7904	LOADING ARM S UNIT
311	645 054 7911	LOADING ARM T UNIT
312	645 054 7928	INCLINED BASE T UINT, 3RD VA/(MPX 360)
313	645 054 7942	P5 ARM ASS'Y 2
314	645 054 7966	TENSION ARM ASS'Y 2
315	645 054 7935	INCLINED BASE S UNIT,OVD-7 MPX
316	645 062 6890	SPRING LOCKER
317	645 054 8291	CASS,HOLDER
318	645 054 8345	CASS,SIDE L
319	645 054 8352	CASS,SIDE R
320	645 054 8307	LOCKER,R
321	645 054 7980	LINK UNIT
322	645 054 7997	POST,CASS GUIDE
323	645 054 8055	REEL,S (S),IME 0.1, OVD-7 REEL HIKIM
324	645 054 8062	REEL,T (S),IME 0.1, OVD-7 REEL HIKIM
325	645 054 8017	GEAR,IDLER
326	645 054 8024	GEAR,CLUTCH
327	645 054 8031	GEAR,COUPLING
328	645 054 8048	LEVER,CLUTCH
329	645 054 8079	GEAR,MAIN LOADING
330	645 054 8086	LEVER,TENSION,OVD-6S
331	645 054 8093	HOLDER,TENSION,ES-5(BLACK)
332	645 054 8109	CAP.P4,OPENER.CASS SET TOOL
333	645 058 3193	BAND,TENSION
334	645 054 8116	CONNECT,TENSION
335	645 054 8147	ARM,BRAKE T
336	645 058 3209	BAND,BRAKE T
337	645 054 8154	CAM,PINCH ROLLER
338	645 054 8161	CAM,MAIN
339	645 054 8178	ROD,MAIN
340	645 054 8192	GEAR,JOINT, ANGLE (LEFT),REVERSE PROG
341	645 054 8239	SPRING,TENSION
342	645 054 8284	SPRING,BRAKE T
343	645 054 8253	SPRING,COUPLING
344	645 054 8260	SPRING,RING
345	645 054 8369	LEVER,LINK 2
346	645 054 8314	LEVER,FLAP
347	645 054 8321	CASS,OPENER
348	645 059 6100	REFLECTOR,LED
349	645 054 8338	BRACKET,TOP 3V
501	645 054 7768	SCREW,TAP TITE(S) BI,8 CH, FE HEAD,FE,HEAD
503	645 054 7744	SCREW,TAP TITE(S) BI,4 CH, AC HEAD (BASE/CHA
504	645 054 7737	SCREW,PAN,AC HEAD
506	645 054 7720	SCREW/WASHER(A) M3X, LOADING MOTOR
507	645 054 7713	SCREW/WASHER(A) M2.,CYL.
508	645 054 7850	POLYSLIDER WASHER 2,.13, REEL ADJ.
509	645 054 7843	POLYSLIDER WASHER(CU, 4. T0.5,CLUTCH
510	645 059 6094	SCREW,TAP TITE(S) BI, 6 CH,REF.LED,FL-8 (L)
502	645 054 7867	E-RING,CAM MAIN
505	645 054 7805	SCREW,TAP TITE(B) PA, P 6 CH, CAPS,MTR
CD1501	645 059 5912	CORD JUMPER 2H071704, CYL-CAP/M L=170FFC WO/TA
CD1502	645 054 7102	CORD JUMPER 2Y021,468, 2P LDM-CPA 190MM OVD
H5001	645 059 5943	HEAD (AUDIO CONTROL), 1X2RPE22-756,CHANGE POL
H5002	645 059 5950	HEAD (FULL ERASE),ERS11-154, 2PIN CONNECTO
M101	⚠ 645 059 7015	MOTOR (LOADING) MDB2
M2001	⚠ 645 059 5936	CAPSTAN DD UNIT F2QV, 3IN1 LOW VOLTAGE 126.1
M2003	645 054 7164	MICRO MOTOR, 01TYPE PCB SMALL 43
UN4001	⚠ 645 064 3453	CYLINDER UNIT ASS'Y

EXPLODED VIEW (SPEAKER)

MECHANICAL EXPLODED VIEW (SPEAKER ASS'Y)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(SPEAKER ASS'Y)
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PCBD30
(SPEAKER MAIN PCB ASS'Y)
CD5403
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PCBD50
(SPEAKER WOOFER PCB ASS'Y)
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906
904
PCBD40
(SPEAKER POWER PCB ASS'Y)
CD5506
CD5404
903
CD5507
CD550
PCBD60
(SPEAKER SPACER 1 PCB)
PCBD70
(SPEAKER SPACER 2 PCB)
CD5501
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SP001
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SP002
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SP001
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SP001
(SATELLITE SPEAKER)
SP001
(SATELLITE SPEAKER)

PARTS LIST

SPEAKER SYSTEM

REF.NO.	PART NO.	DESCRIPTION
800	645 064 3668	SPEAKER ASS'Y
801	645 064 5068	SHEET,RATING
802	645 062 6838	CUSHION
803	645 062 6906	WASHER
804	645 062 6913	WASHER
901	645 062 6852	SCREW,WOOD BRAZIER,BK,BACK, PANEL,SPEAKER B
902	645 062 6876	SCREW,TAP TITE(S),10 BK, DIN CONNECTOR
903	645 061 2817	SCREW,TAP TITE(S) BR,8 CH, MAIN PCB + HEAT
904	645 062 6869	SCREW,TAP TITE(S),. 12 CH, IC + HEAT SINK,
905	645 062 6883	SCREW,TAP TITE(P),10 BK, PUSH TERMINAL
906	645 062 6845	SCREW,WASHER(B),TRANS
PCBD60	645 064 3644	PCB VECA20BW, SPACER1 PCB MAT=C 2.5
PCBD70	645 064 3651	PCB VECA21B, SPACER2 PCB MAT=C 2.5
SP002	645 064 4757	POWER AMP CABINET AS, TS3000/XE),SUB WOOFER

SPEAKER MAIN P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
PCBD30	614 328 6424	ASSY,PWB,SPK,MAIN,TS3000XE (Only initial)
C5521	645 062 6517	CMP 0.1 UF 100V MKT, 100V MKT,MKT TAPING
C5522	645 062 6517	CMP 0.1 UF 100V MKT, 100V MKT,MKT TAPING
C5525	645 062 6517	CMP 0.1 UF 100V MKT, 100V MKT,MKT TAPING
C5526	645 062 6517	CMP 0.1 UF 100V MKT, 100V MKT,MKT TAPING
C5529	645 055 4100	CE 50NA10MT1 10 UF 50V, A TYPE TAPING 2.5MM 5
C5538	645 062 6425	CE 4700 UF 35V,35V, VK SERIES 1 35.5
C5540	645 062 6425	CE 4700 UF 35V,35V, VK SERIES 1 35.5
C5553	645 062 6524	CMPL 0.1 UF 50V TF,50V TF, TAPING 10. 8.
C5555	645 062 6500	CMPL 0.22 UF 50V MMT, TS STRAIGHT TAPING P=5MM
C5558	645 062 6517	CMP 0.1 UF 100V MKT,
C5571	645 064 3866	CC RTHE40TKYB471K 47,50V B, YB 4. 3.0 TAPE
C5572	645 064 3866	CC RTHE40TKYB471K 47,50V B, YB 4. 3.0 TAPE
C5573	645 064 3866	CC RTHE40TKYB471K 47,50V B, YB 4. 3.0 TAPE
C5574	645 064 3866	CC RTHE40TKYB471K 47,50V B, YB 4. 3.0 TAPE
C5575	645 064 3866	CC RTHE40TKYB471K 47,50V B, YB 4. 3.0 TAPE
CD5501	645 064 4603	CORD CONNECTOR CUC, L=170MM 2PIN P=2.5MM 1.1
CD5506	645 062 6593	CORD CONNECTOR CH132, +VS RED P=2.5MM 3PIN 3.8
CD5507	645 062 6609	CORD CONNECTOR CH132, -VS WHITE P=2.5MM 3PIN 3
CD550	645 062 6562	FLAT CABLE 4C BLACK, 4C BLACK 200MM
CP5502	645 062 6654	CONNECTOR PCB SIDE 3, V2-3P(BLUE),P=3.96MM 3P
CP550A	645 062 6647	WIRE HOLDER B2013H02, 4PIN 2.0MMPITCH 1.5
D5502	⚠ 645 054 4866	DIODE,RM11C-EIC, PRV=1000V IO=1.2A 0.456
D5503	⚠ 645 054 4866	DIODE,RM11C-EIC, PRV=1000V IO=1.2A 0.456
D5504	⚠ 645 054 4866	DIODE,RM11C-EIC, PRV=1000V IO=1.2A 0.456
D5505	⚠ 645 054 4866	DIODE,RM11C-EIC, PRV=1000V IO=1.2A 0.456
D5506	⚠ 645 054 4866	DIODE,RM11C-EIC, PRV=1000V IO=1.2A 0.456
D5507	⚠ 645 054 4866	DIODE,RM11C-EIC, PRV=1000V IO=1.2A 0.456
D5508	⚠ 645 054 4866	DIODE,RM11C-EIC, PRV=1000V IO=1.2A 0.456
D5509	⚠ 645 054 4866	DIODE,RM11C-EIC, PRV=1000V IO=1.2A 0.456
IC5501	⚠ 645 062 6432	IC TDA7264A,O AMP 5.55
IC5502	⚠ 645 062 6432	IC TDA7264A,O AMP 5.55
IC5503	⚠ 645 062 6456	IC TDA7296,AUDIO AMP 6
J5501	645 058 2592	JACK MD24-
J5502	645 062 6630	TERMINAL PRESS,0_PBSN, SPEAKER JACK 10P
L5600	645 062 6579	COIL VRK12-11
L5601	645 062 6579	COIL VRK12-11
L5602	645 062 6579	COIL VRK12-11
L5603	645 062 6579	COIL VRK12-11
L5604	645 062 6579	COIL VRK12-11
MS002	645 062 6753	SILICON,SHEET,2 FAI3.2), 3 2 FAI3.2
MS003	645 062 6753	SILICON,SHEET,2 FAI3.2), 3 2 FAI3.2
MS004	645 062 6753	SILICON,SHEET,2 FAI3.2), 3 2 FAI3.2
Q104	645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE
Q105	645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE
Q1701	⚠ 645 051 4074	TRANSISTOR,KTA1281 Y,1_Y, IC=-2A PC=1W HFE=12
Q1702	⚠ 645 054 6341	TR KTC3209_Y-AT,9_Y-AT, TAPING HFE=120-2
Q1703	⚠ 645 054 6334	TR KTA1271_Y-AT,71_Y-AT, VCBO=-35V,IC=-8
Q1704	645 054 6372	TRANSISTOR DTC124EKAT146, 4EKAT146,TAPING SMT TYP
Q1705	⚠ 645 054 6341	TR KTC3209_Y-AT,9_Y-AT, TAPING HFE=120-2
Q1706	⚠ 645 054 6327	TR KTA1241_Y-AT,1_Y-AT, HFE=160-320(Y) P
Q1708	645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE
Q1709	645 064 4375	COMPOUND TRANSISTOR, 4EKAT146,TAPING SMT TYP
R5515	⚠ 645 064 4269	R,FUSE RNF25UCTP101J, 1/4W,5MM TAPING
R5524	⚠ 645 064 4269	R,FUSE RNF25UCTP101J, 1/4W,5MM TAPING

SPEAKER POWER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
PCBD40	614 328 6431	ASSY,PWB,SPK PWR,TS3000XE (Only initial)
CD5401	⚠ 645 064 4870	CORD AC BUSH 0665880, E 5FEET L=115 W/CON E2N
CD5403	645 062 6616	CORD CONNECTOR CUU31, L=160MM 3PIN RED/BLACK/W
CD5404	645 062 6623	CORD CONNECTOR CUU31, L=180MM 3PIN BLUE/BROWN/
CP5401	645 062 6678	CONNECTOR PCB SIDE 2,V2-3PD, PITCH=7.92MM 2PI
CP5402	645 056 5878	CONNECTOR PCB SIDE A,V2-2P, 2PIN P=2.0MM STRA
D5401	645 051 2780	DIODE,SILICON 1SS133T-77, O.1TAPING VR=80V IO=130
F5401	⚠ 645 064 4801	FUSE 50,UL/SEMCO/VDE 1
F5402	⚠ 645 064 4795	FUSE 50,UL/SEMCO/VDE 1
F5403	⚠ 645 064 4795	FUSE 50,UL/SEMCO/VDE 1

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
F5404	⚠ 645 064 4818	FUSE 50,UL/SEMCO/VDE 1
F5405	⚠ 645 064 4818	FUSE 50,UL/SEMCO/VDE 1
FH5401	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5402	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5403	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5404	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5405	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5406	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5407	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5408	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5409	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5410	645 051 4432	HOLDER,FUSE,TAPING 0.60
RY5401	⚠ 645 064 4542	RELAY ALKS329 RY540, VAC UL CSA 12
T5401	⚠ 645 064 4504	TRANSFORMER,POWER AC,001H, AC230V 50HZ 2500

SPEAKER WOOFER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
PCBD50	614 328 6448	ASSY,PWB,SPK,WOO,TS3000XE (Only initial)
C5520	645 064 3927	CE 35NA22MT1 22, A TYPE TAPING 2.5MM 11
C5530	645 055 4100	CE 50NA10MT1 10 UF 50V, A TYPE TAPING 2.5MM 5
C5537	645 062 6418	CE 4700 UF 50V,50V, VR SERIES 2 40 8
C5539	645 062 6418	CE 4700 UF 50V,50V, VR SERIES 2 40 8
C5545	645 062 6524	CMPL 0.1 UF 50V TF,50V TF, TAPING 10. 8.
C5549	645 062 6524	CMPL 0.1 UF 50V TF,50V TF, TAPING 10. 8.
C5554	645 062 6517	CMP 0.1 UF 100V MKT,100V MKT
C5570	645 064 3873	CC RTHE80TKYB472K 0., 50V B,YB 8. 3.0 TAP
CP5503	645 062 6661	CONNECTOR PCB SIDE 3, V2-3P,PITCH=3.96 3PIN 0
CP5504	645 062 6739	LUG PIN TAB 205 NEW,+ SIDE 0.23
CP5505	645 062 6746	LUG PIN TAB 110 NEW,- SIDE 0.14
CP550B	645 062 6647	WIRE HOLDER B2013H02, 4PIN 2.0MMPITCH 1.5
D5501	⚠ 645 061 0660	DIODE GBL06L-6177, BRIDGE VRM=600V I=2.2A 2
IC5504	⚠ 645 062 6449	IC TDA7294V,OS AUDIO AMP 5.7
L5605	645 062 6579	COIL VRK12-11
Q1707	645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE

PARTS LIST

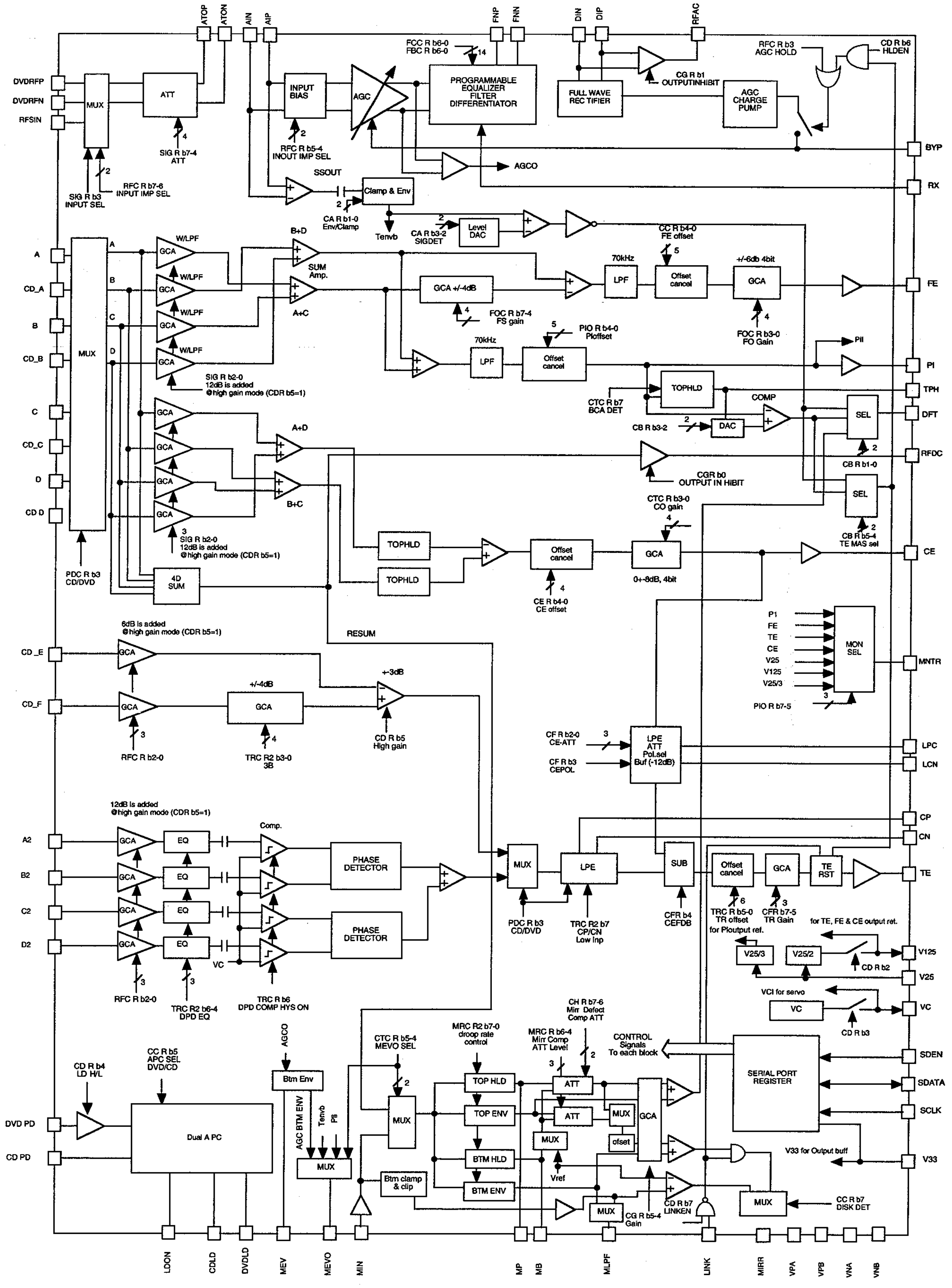
REF.NO.	PART NO.	DESCRIPTION
F5404	⚠ 645 064 4818	FUSE 50,UL/SEMCO/VDE 1
F5405	⚠ 645 064 4818	FUSE 50,UL/SEMCO/VDE 1
FH5401	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5402	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5403	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5404	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5405	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5406	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5407	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5408	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5409	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5410	645 051 4432	HOLDER,FUSE,TAPING 0.60
RY5401	⚠ 645 064 4542	RELAY ALKS329 RY540, VAC UL CSA 12
T5401	⚠ 645 064 4504	TRANSFORMER,POWER AC,001H, AC230V 50HZ 2500

SPEAKER WOOFER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
PCBD50	614 328 6448	ASSY,PWB,SPK,WOO,TS3000XE (Only initial)
C5520	645 064 3927	CE 35NA22MT1 22, A TYPE TAPING 2.5MM 11
C5530	645 055 4100	CE 50NA10MT1 10 UF 50V, A TYPE TAPING 2.5MM 5
C5537	645 062 6418	CE 4700 UF 50V,50V, VR SERIES 2 40 8
C5539	645 062 6418	CE 4700 UF 50V,50V, VR SERIES 2 40 8
C5545	645 062 6524	CMPL 0.1 UF 50V TF,50V TF, TAPING 10. 8.
C5549	645 062 6524	CMPL 0.1 UF 50V TF,50V TF, TAPING 10. 8.
C5554	645 062 6517	CMP 0.1 UF 100V MKT,100V MKT
C5570	645 064 3873	CC RTHE80TKYB472K 0., 50V B,YB 8. 3.0 TAP
CP5503	645 062 6661	CONNECTOR PCB SIDE 3, V2-3P,PITCH=3.96 3PIN 0
CP5504	645 062 6739	LUG PIN TAB 205 NEW,+ SIDE 0.23
CP5505	645 062 6746	LUG PIN TAB 110 NEW,- SIDE 0.14
CP550B	645 062 6647	WIRE HOLDER B2013H02, 4PIN 2.0MMPITCH 1.5
D5501	⚠ 645 061 0660	DIODE GBL06L-6177, BRIDGE VRM=600V I=2.2A 2
IC5504	⚠ 645 062 6449	IC TDA7294V,OS AUDIO AMP 5.7
L5605	645 062 6579	COIL VRK12-11
Q1707	645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE

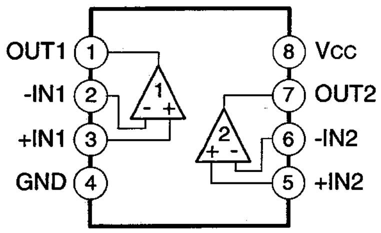
IC BLOCK DIAGRAM & DESCRIPTION

IC2601 ZR3670TQC(READ CHANNEL)

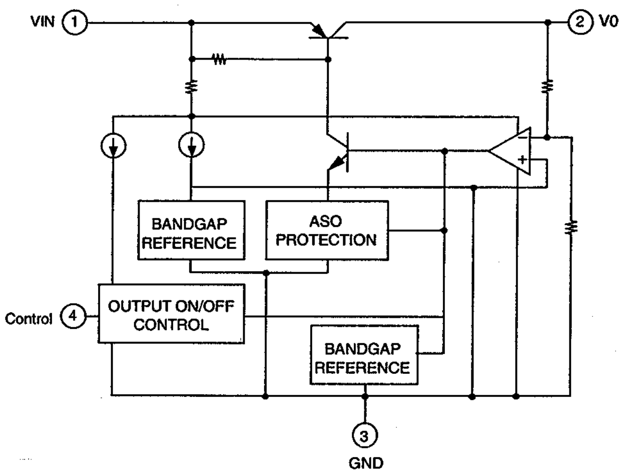

ATOP
ATON
AIN
AIP
FNP
FNN
DIN
DIP
RFAC
DVDRFP
DVDRFN
RFSIN
MUX
ATT
SIG R b7-4
ATT
SIG R b3
INPUT SEL
RFC R b7-6
INPUT IMP SEL
INPUT BIAS
RFC R b5-4
INOUT IMP SEL
AGC
FCC R b6-0
FBC R b6-0
14
PROGRAMMABLE EQUALIZER FILTER DIFFERENTIATOR
FULL WAVE REC TIFIER
CG R b1
OUTPUTINHIBIT
AGC CHARGE PUMP
RFC R b3
AGC HOLD
CD R b6
HLDEN
BYP
RX
AGCO
SSOUT
Clamp & Env
CA R b1-0
Env/Clamp
Tenvb
CA R b3-2
SIGDET
Level DAC
CC R b4-0
FE offset
A
CD_A
B
CD_B
C
CD_C
D
CD D
W/LPF
GCA
B+D
SUM Amp.
A+C
GCA +/-4dB
FOC R b7-4
FS gain
70kHz
LPF
Offset cancel
+/-6db 4bit
FOC R b3-0
FO Gain
FE
PIO R b4-0
PIoffset
PII
PI
TOPHLD
TPH
CTC R b7
BCA DET
COMP
CB R b3-2
DAC
SEL
DFT
CB R b1-0
RFDC
CGR b0
OUTPUT IN HIBIT
SIG R b2-0
12dB is added
@high gain mode (CDR b5=1)
A+D
B+C
CTC R b3-0
CO gain
CB R b5-4
TE MAS sel
CE
0+-8dB, 4bit
CE R b4-0
CE offset
PDC R b3
CD/DVD
4D SUM
RESUM
P1
TE
V25
V125
V25/3
MON SEL
MNTR
PIO R b7-5
6dB Is added
@high gain mode (CDR b5=1)
CD _E
CD_F
+-3dB
+/-4dB
CD R b5
High gain
RFC R b2-0
TRC R2 b3-0
3B
CF R b2-0
CE-ATT
CF R b3
CEPOL
LPE ATT Pol.sel Buf (-12dB)
LPC
LCN
CP
CN
12dB Is added
@high gain mode (CDR b5=1)
Comp.
A2
B2
C2
D2
EQ
VC
PHASE DETECTOR
LPE
SUB
TE RST
CFR b4
CEFDB
TRC R2 b7
CP/CN
Low Inp
TRC R b5-0
TR offset
for PIoutput ref.
CFR b7-5
TR Gain
for TE, FE & CE output ret.
V25/3
V25/2
V125
CD R b2
V25
VCI for servo
CD R b3
TRC R2 b6-4
DPD EQ
TRC R b6
DPD COMP HYS ON
AGCO
Btm Env
AGC BTM ENV
Tenvb
PII
CTC R b5-4
MEVO SEL
MRC R2 b7-0
droop rate
control
MRC R b6-4
Mirr Comp
ATT Level
CH R b7-6
Mirr Defect
Comp ATT
CONTROL
Signals
To each block
SERIAL PORT REGISTER
SDEN
SDATA
SCLK
V33 for Output buff
V33
CD R b4
LD H/L
CC R b5
APC SEL
DVD/CD
DVD PD
CD PD
Dual A PC
TOP HLD
TOP ENV
BTM HLD
BTM ENV
Btm clamp & clip
Vref
ofset
CG R b5-4
Gain
CD R b7
LINKEN
CC R b7
DISK DET
LDON
CDLD
DVDLD
MEV
MEVO
MIN
MP
MB
MLPF
LINK
MIRR
VPA
VPB
VNA
VNB

IC BLOCK DIAGRAM & DESCRIPTION

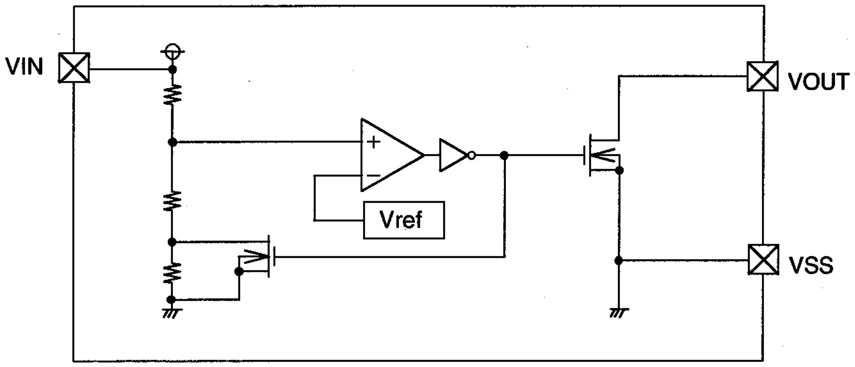
IC2602 BA10358F-E2(DUAL OP-AMP)


OUT1
1
-IN1
2
+IN1
3
GND
4
8
Vcc
7
OUT2
6
-IN2
5
+IN2
1
2

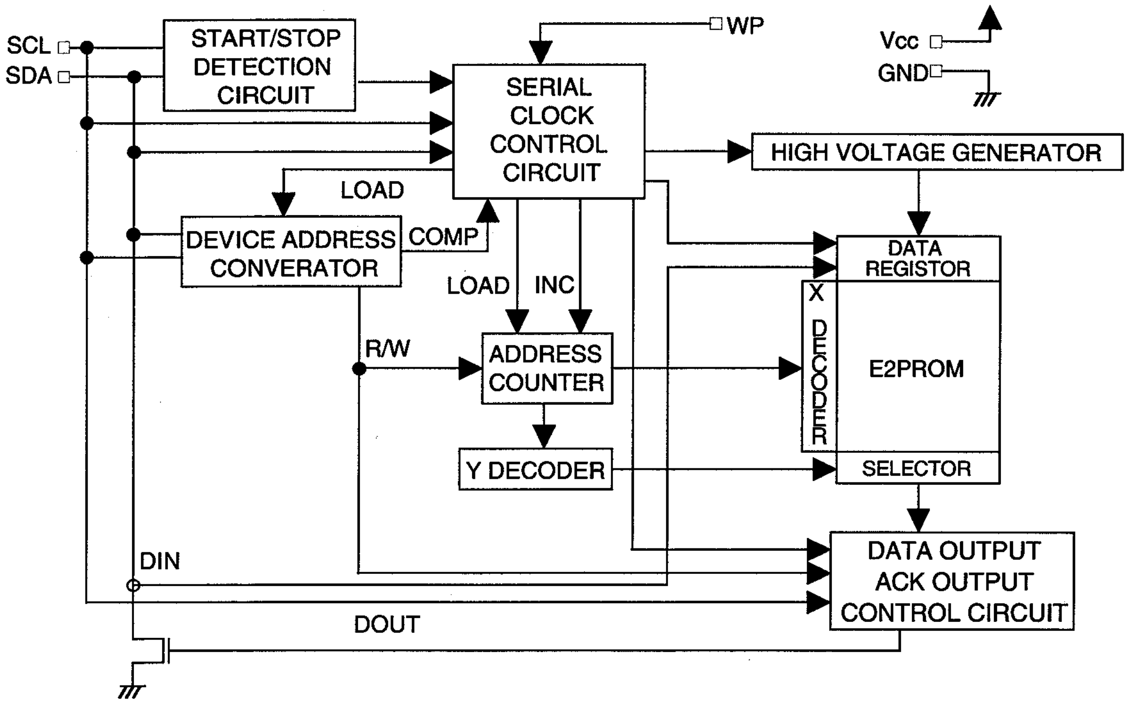
IC1701 KIA78R09API(9V REG.)


VIN
1
2
VO
BANDGAP REFERENCE
ASO PROTECTION
Control
4
OUTPUT ON/OFF CONTROL
BANDGAP REFERENCE
3
GND

IC3002 XC61CN3102SR(SYSTEM RESET)

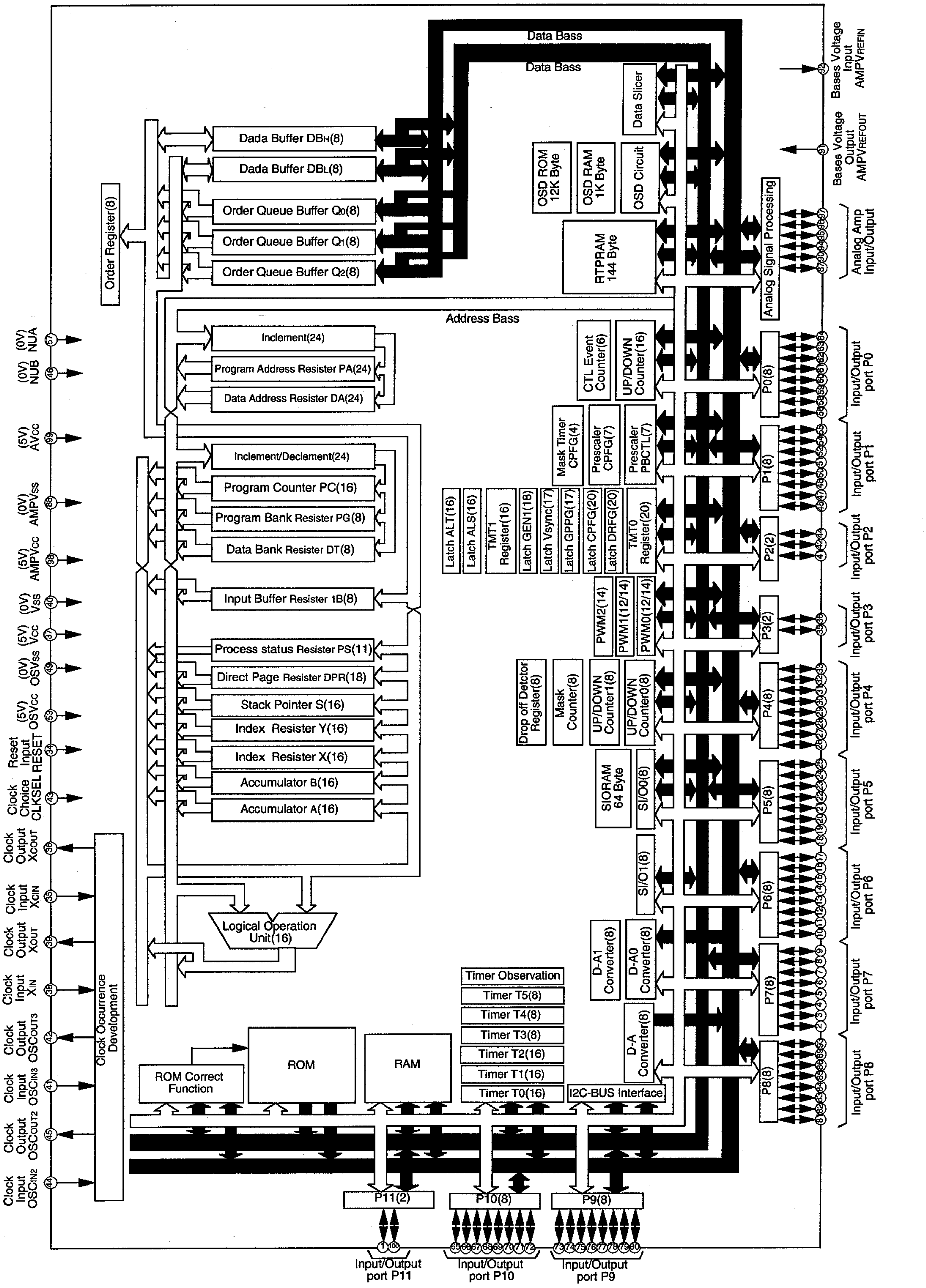

VIN
VOUT
Vref
VSS

IC3099 S-24C16AFJA-TB-01(EEP ROM)


SCL
SDA
START/STOP DETECTION CIRCUIT
WP
Vcc
GND
SERIAL CLOCK CONTROL CIRCUIT
HIGH VOLTAGE GENERATOR
LOAD
DEVICE ADDRESS CONVERATOR
COMP
DATA REGISTOR
LOAD
INC
X DECODER
E2PROM
R/W
ADDRESS COUNTER
Y DECODER
SELECTOR
DIN
DATA OUTPUT ACK OUTPUT CONTROL CIRCUIT
DOUT

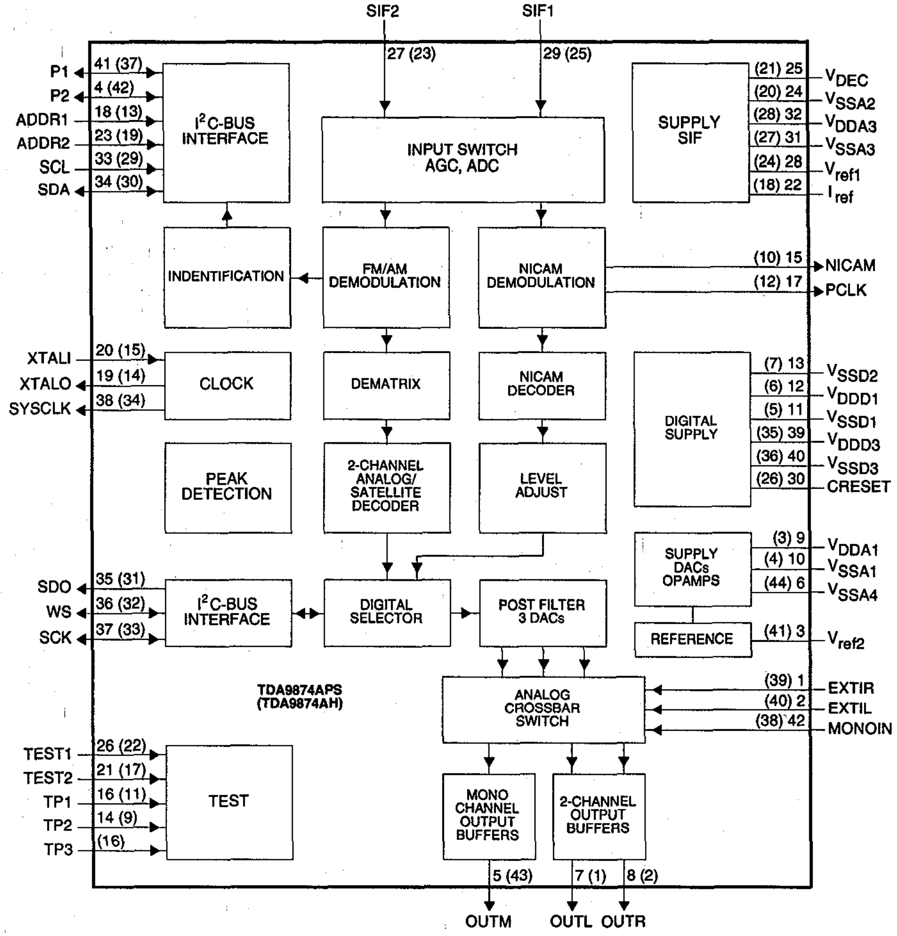
IC BLOCK DIAGRAM & DESCRIPTION

IC3001 OEC7099A(SYSCON/SOFTWARE/SERVO)


Data Bass
Data Bass
Dada Buffer DBH(8)
Dada Buffer DBL(8)
Order Queue Buffer Q0(8)
Order Queue Buffer Q1(8)
Order Queue Buffer Q2(8)
Order Register(8)
Address Bass
Inclement(24)
Program Address Resister PA(24)
Data Address Resister DA(24)
Inclement/Declement(24)
Program Counter PC(16)
Program Bank Resister PG(8)
Data Bank Resister DT(8)
Input Buffer Resister 1B(8)
Process status Resister PS(11)
Direct Page Resister DPR(18)
Stack Pointer S(16)
Index Resister Y(16)
Index Resister X(16)
Accumulator B(16)
Accumulator A(16)
Logical Operation Unit(16)
Clock Occurrence Development
ROM Correct Function
ROM
RAM
Timer Observation
Timer T5(8)
Timer T4(8)
Timer T3(8)
Timer T2(16)
Timer T1(16)
Timer T0(16)
I2C-BUS Interface
Data Slicer
OSD ROM 12K Byte
OSD RAM 1K Byte
OSD Circuit
RTPRAM 144 Byte
Analog Signal Processing
CTL Event Counter(6)
UP/DOWN Counter(16)
Mask Timer CPFG(4)
Prescaler CPFG(7)
Prescaler PBCTL(7)
Latch ALT(16)
Latch ALS(16)
TMT1 Register(16)
Latch GEN1(18)
Latch Vsync(17)
Latch GPPG(17)
Latch CPFG(20)
Latch DRFG(20)
TMT0 Register(20)
PWM2(14)
PWM1(12/14)
PWM0(12/14)
Drop off Detctor Register(8)
Mask Counter(8)
UP/DOWN Counter1(8)
UP/DOWN Counter0(8)
SIORAM 64 Byte
SI/O0(8)
SI/O1(8)
D-A1 Converter(8)
D-A0 Converter(8)
D-A Converter(8)
P0(8)
P1(8)
P2(2)
P3(2)
P4(8)
P5(8)
P6(8)
P7(8)
P8(8)
P11(2)
P10(8)
P9(8)
Bases Voltage Input AMPVREFIN 92
Bases Voltage Output AMPVREFOUT 91
Analog Amp Input/Output
Input/Output port P0
Input/Output port P1
Input/Output port P2
Input/Output port P3
Input/Output port P4
Input/Output port P5
Input/Output port P6
Input/Output port P7
Input/Output port P8
Input/Output port P11
Input/Output port P10
Input/Output port P9
(0V) NUA 57
(0V) NUB 46
(5V) AVCC 99
(0V) AMPVSS 88
(5V) AMPVCC 98
(0V) VSS 40
(5V) VCC 37
(0V) OSVSS 49
(5V) OSVCC 53
Reset Input RESET 34
Clock Choice CLKSEL 43
Clock Output XCOUT 36
Clock Input XCIN 35
Clock Output XOUT 39
Clock Input XIN 38
Clock Output OSCOUT3 42
Clock Input OSCIN3 41
Clock Output OSCOUT2 45
Clock Input OSCIN2 44

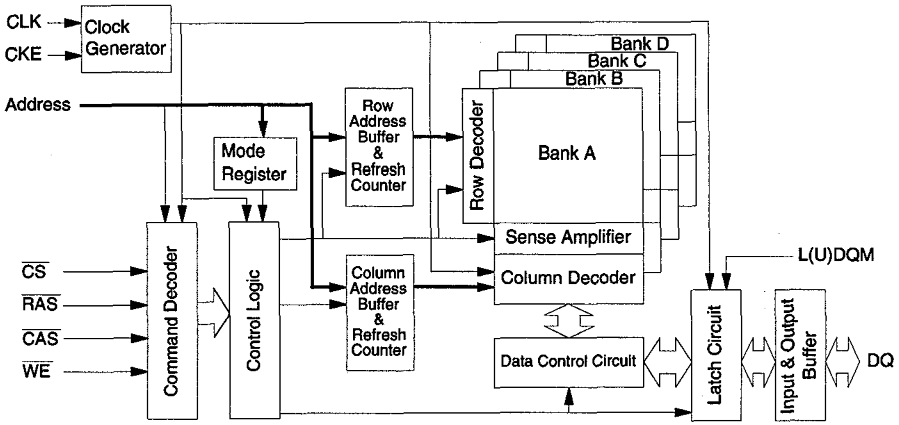
IC BLOCK DIAGRAM & DESCRIPTION

IC801 TDA9874AH(NICAM STEREO)


SIF2
SIF1
27 (23)
29 (25)
P1
P2
ADDR1
ADDR2
SCL
SDA
41 (37)
4 (42)
18 (13)
23 (19)
33 (29)
34 (30)
I²C-BUS INTERFACE
INPUT SWITCH AGC, ADC
SUPPLY SIF
(21) 25
(20) 24
(28) 32
(27) 31
(24) 28
(18) 22
VDEC
VSSA2
VDDA3
VSSA3
Vref1
Iref
INDENTIFICATION
FM/AM DEMODULATION
NICAM DEMODULATION
(10) 15
(12) 17
NICAM
PCLK
XTALI
XTALO
SYSCLK
20 (15)
19 (14)
38 (34)
CLOCK
DEMATRIX
NICAM DECODER
DIGITAL SUPPLY
(7) 13
(6) 12
(5) 11
(35) 39
(36) 40
(26) 30
VSSD2
VDDD1
VSSD1
VDDD3
VSSD3
CRESET
PEAK DETECTION
2-CHANNEL ANALOG/ SATELLITE DECODER
LEVEL ADJUST
SUPPLY DACs OPAMPS
(3) 9
(4) 10
(44) 6
VDDA1
VSSA1
VSSA4
SDO
WS
SCK
35 (31)
36 (32)
37 (33)
I²C-BUS INTERFACE
DIGITAL SELECTOR
POST FILTER 3 DACs
REFERENCE
(41) 3
Vref2
TDA9874APS (TDA9874AH)
ANALOG CROSSBAR SWITCH
(39) 1
(40) 2
(38) 42
EXTIR
EXTIL
MONOIN
TEST1
TEST2
TP1
TP2
TP3
26 (22)
21 (17)
16 (11)
14 (9)
(16)
TEST
MONO CHANNEL OUTPUT BUFFERS
2-CHANNEL OUTPUT BUFFERS
5 (43)
7 (1)
8 (2)
OUTM
OUTL
OUTR

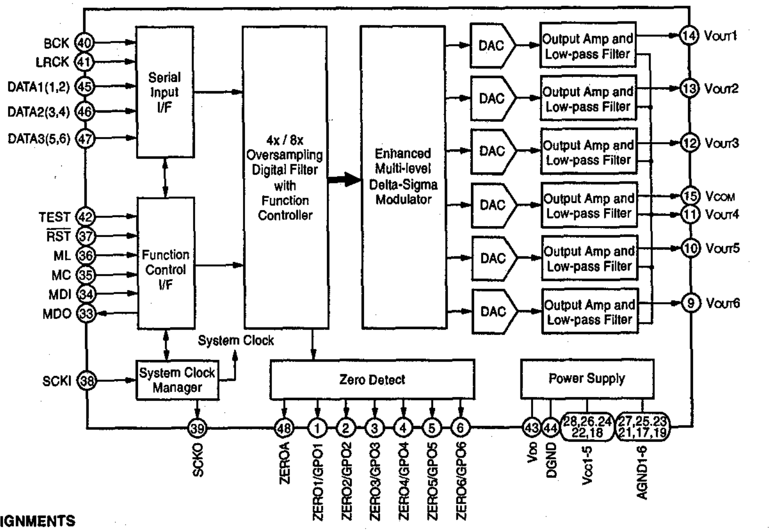
IC BLOCK DIAGRAM & DESCRIPTION

IC4005 M12L64164A-7T(64M SDRAM)


CLK
CKE
Clock Generator
Address
Mode Register
Row Address Buffer & Refresh Counter
Row Decoder
Bank D
Bank C
Bank B
Bank A
Sense Amplifier
L(U)DQM
CS
RAS
CAS
WE
Command Decoder
Control Logic
Column Address Buffer & Refresh Counter
Column Decoder
Data Control Circuit
Latch Circuit
Input & Output Buffer
DQ

IC BLOCK DIAGRAM & DESCRIPTION

IC7302 PCM1602Y(6CH DAC)

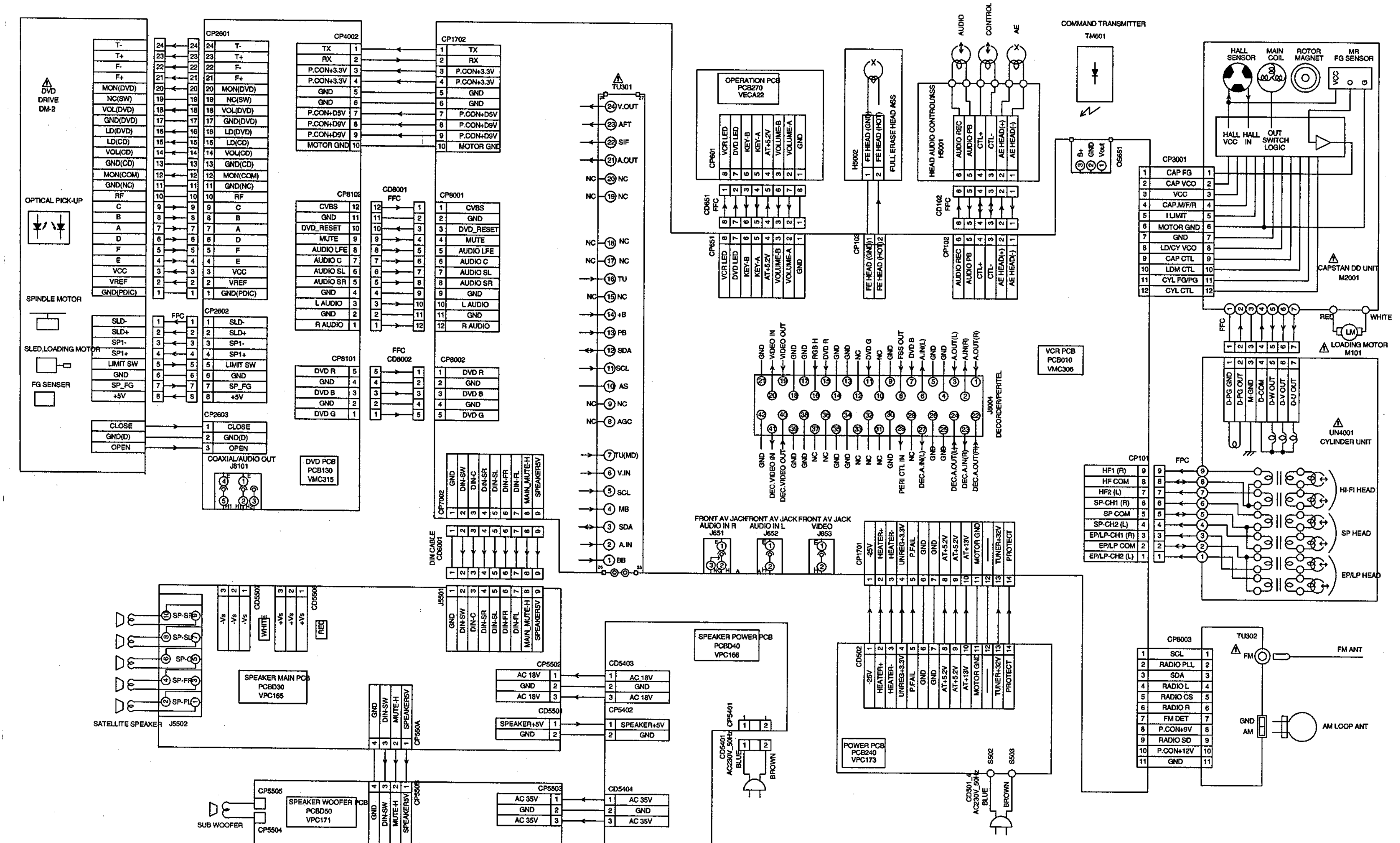

BCK 40
LRCK 41
DATA1(1,2) 45
DATA2(3,4) 46
DATA3(5,6) 47
TEST 42
RST 37
ML 36
MC 35
MDI 34
MDO 33
SCKI 38
Serial Input I/F
Function Control I/F
System Clock Manager
System Clock
4x / 8x Oversampling Digital Filter with Function Controller
Enhanced Multi-level Delta-Sigma Modulator
DAC
Output Amp and Low-pass Filter
Zero Detect
Power Supply
14 VOUT1
13 VOUT2
12 VOUT3
15 VCOM
11 VOUT4
10 VOUT5
9 VOUT6
39 SCKO
48 ZEROA
1 ZERO1/GPO1
2 ZERO2/GPO2
3 ZERO3/GPO3
4 ZERO4/GPO4
5 ZERO5/GPO5
6 ZERO6/GPO6
43 VDD
44 DGND
28,26,24,22,18 VCC1-5
27,25,23,21,17,19 AGND1-6

PIN ASSIGNMENTS

PIN	NAME	I/O	DESCRIPTION
1	ZERO1/GPO1	O	Zero Data Flag for $V_{OUT}1$. Can also be used as GPO pin.
2	ZERO2/PGO2	O	Zero Data Flag for $V_{OUT}2$. Can also be used as GPO pin.
3	ZERO3/PGO3	O	Zero Data Flag for $V_{OUT}3$. Can also be used as GPO pin.
4	ZERO4/PGO4	O	Zero Data Flag for $V_{OUT}4$. Can also be used as GPO pin.
5	ZERO5/PGO5	O	Zero Data Flag for $V_{OUT}5$. Can also be used as GPO pin.
6	ZERO6/PGO6	O	Zero Data Flag for $V_{OUT}6$. Can also be used as GPO pin.
7	NC	-	No Connection
8	NC	-	No Connection
9	$V_{OUT}6$	O	Voltage Output of Audio Signal Corresponding to Rch on DATA3. Up to 96kHz.
10	$V_{OUT}5$	O	Voltage Output of Audio Signal Corresponding to Lch on DATA3. Up to 96kHz.
11	$V_{OUT}4$	O	Voltage Output of Audio Signal Corresponding to Rch on DAYA2. Up to 96kHz.
12	$V_{OUT}3$	O	Voltage Output of Audio Signal Corresponding to Lch on DATA2. Up to 96kHz.
13	$V_{OUT}2$	O	Voltage Output of Audio Signal Corresponding to Rch on DATA1. Up to 192kHz.
14	$V_{OUT}1$	O	Voltage Output of Audio Signal Corresponding to Lch on DATA1. Up to 192kHz.
15	V_{COM}	O	Common Voltage Output. This pin should be bypassed with a 10uF capacitor to AGND.
16	NC	O	No Connection
17	AGND5	-	Analog Ground
18	$V_{CC}5$	-	Analog Power Supply, +5V
19	AGND6	-	Analog Ground
20	NC	-	No Connection
21	AGND4	-	Analog Ground
22	$V_{CC}4$	-	Analog Power Supply, +5V
23	AGND3	-	Analog Ground
24	$V_{CC}3$	-	Analog Power Supply, +5V
25	AGND2	-	Analog Ground
26	$V_{CC}2$	-	Analog Power Supply, +5V
27	AGND1	-	Analog Ground
28	$V_{CC}1$	-	Analog Power Supply, +5V
29	NC	-	No Connection
30	NC	-	No Connection
31	NC	-	No Connection
32	NC	-	No Connection
33	MDO	O	Serial Data Output for Function Register Control Port (3)
34	MDI	I	Serial Data Input for Function Register Control Port (1)
35	MC	I	Shift Clock for Function Register Control Port (1)
36	ML	I	Latch Enable for Function Register Control Port (1)
37	$\overline{RST}$	I	System Reset, Active LOW (1)
38	SCKI	I	System Clock In. Input frequency is 128,192,256,384,512, or 768f_S.(2)
39	SCKO	O	Buffered Clock Output. Output frequency is 128,192,256,384,512, or 768f_S or one-half of 128,192,256,384,512 or 768f_S.
40	BCK	I	Shift Clock Input for Serial Audio Data.(2)
41	LRCK	I	Left and Right Clock Input. This clock is equal to the sampling rate, f_S.(2)
42	TEST	-	Test Pin. This pin should be connected to DGND.(1)
43	V_{DD}	-	Digital Power Supply, +3.3V
44	DGND	-	Digital Ground for +3.3V
45	DATA1	I	Serial Audio Data Input for $V_{OUT}1$ and $V_{OUT}2$ (2)
46	DATA2	I	Serial Audio Data Input for $V_{OUT}3$ and $V_{OUT}4$ (2)
47	DATA3	I	Serial Audio Data Input for $V_{OUT}5$ and $V_{OUT}6$ (2)
48	ZEROA	O	Zero Data Flag. Logical "AND" of ZERO1 through ZERO6.

NOTES: (1) Schmitt-Trigger input with internal pull-down, 5V tolerant. (2) Schmitt-Trigger inout, 5V tolerant. (3) Tri-state output.

INTERCONNECTION DIAGRAM

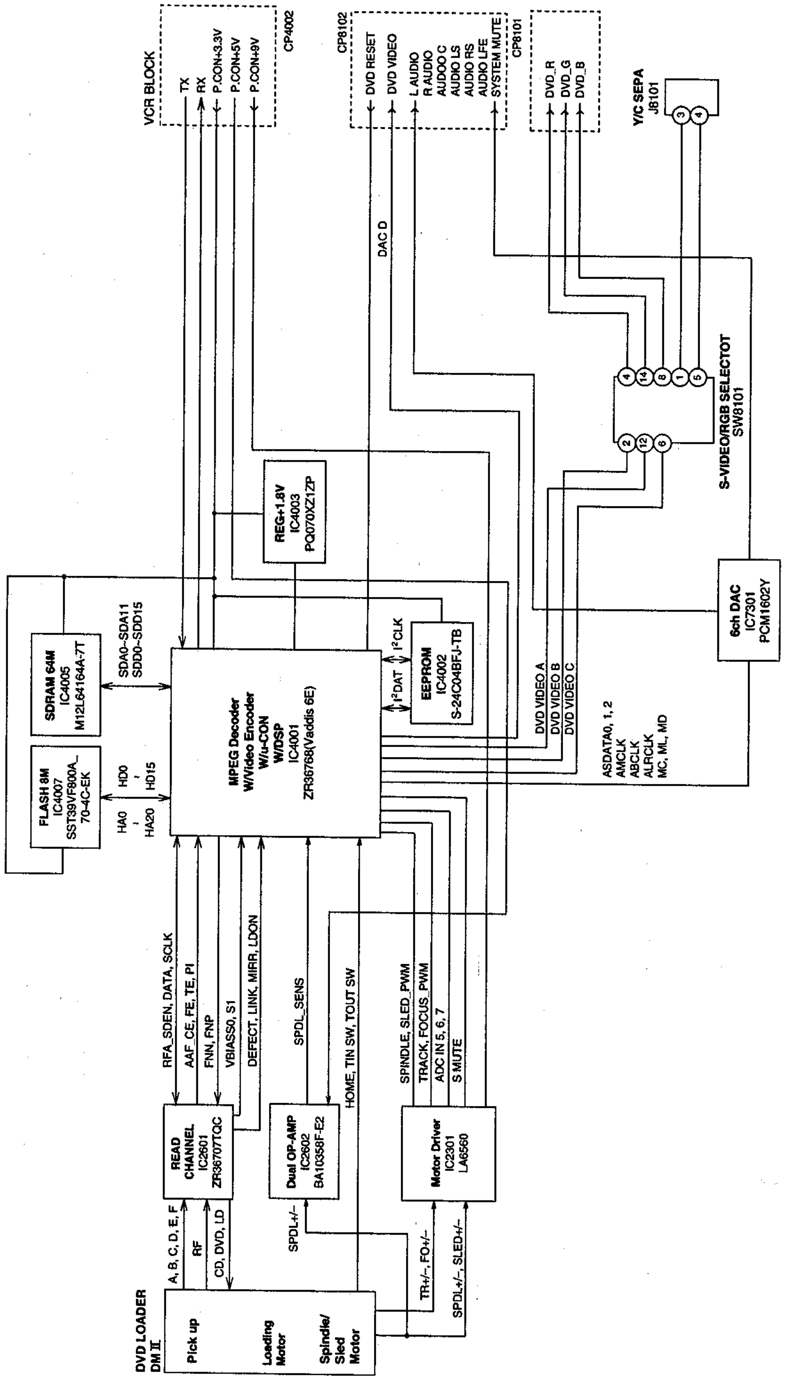

DVD DRIVE DM-2
OPTICAL PICK-UP
SPINDLE MOTOR
SLED,LOADING MOTOR
FG SENSER
CP2601
CP2602
CP2603
FFC
T- T+ F- F+ MON(DVD) NC(SW) VOL(DVD) GND(DVD) LD(DVD) LD(CD) VOL(CD) GND(CD) MON(COM) GND(NC) RF C B A D F E VCC VREF GND(PDIC)
SLD- SLD+ SP1- SP1+ LIMIT SW GND SP_FG +5V
CLOSE GND(D) OPEN
COAXIAL/AUDIO OUT J8101
CP4002
TX RX P.CON+3.3V P.CON+3.3V GND GND P.CON+D5V P.CON+D9V P.CON+D9V MOTOR GND
CP1702
CP8102
CD8001 FFC
CP6001
CVBS GND DVD_RESET MUTE AUDIO LFE AUDIO C AUDIO SL AUDIO SR GND L AUDIO GND R AUDIO
CP8101
CD8002 FFC
CP6002
DVD R GND DVD B GND DVD G
DVD PCB PCB130 VMC315
CP7002
GND DIN-SW DIN-C DIN-SR DIN-SL DIN-FR DIN-FL MAIN_MUTE-H SPEAKER5V
DIN CABLE CD6001
J5501
TU301
V.OUT AFT SIF A.OUT NC NC NC NC TU NC +B PB SDA SCL AS NC AGC TU(MD) V.IN SCL MB SDA A.IN BB
OPERATION PCB PCB270 VECA22
CP601
VCR LED DVD LED KEY-B KEY-A AT+5.2V VOLUME-B VOLUME-A GND
CD651 FFC
CP651
H5002
FE HEAD (GND) FE HEAD (HOT) FULL ERASE HEAD ASS
CP103
HEAD AUDIO CONTROL/ASS H5001
AUDIO CONTROL AE
AUDIO REC AUDIO PB CTL+ CTL- AE HEAD(+) AE HEAD(-)
CD102 FFC
CP102
COMMAND TRANSMITTER TM601
B+ GND Vout
QS651
J8004 DECORDER/PERITEL
GND V-VIDEO IN V-VIDEO OUT GND GND RGB H DVD R GND GND NC DVD G GND FSS OUT DVD B A.IN(L) GND GND A.OUT(L) A.IN(R) A.OUT(R)
GND DEC.VIDEO IN DEC.VIDEO OUT GND GND NC GND GND NC NC GND PERI CTL IN NC DEC.A.IN(L) GND DEC.A.OUT(L) DEC.A.IN(R) DEC.A.OUT(R)
VCR PCB PCB010 VMC306
FRONT AV JACK AUDIO IN R J651
FRONT AV JACK AUDIO IN L J652
FRONT AV JACK VIDEO J653
CP1701
-25V HEATER+ HEATER- UNREG+3.3V P.FAIL GND GND AT+5.2V AT+5.2V AT+13V MOTOR GND TUNER+32V PROTECT
CD502
POWER PCB PCB240 VPC173
CD501_4 AC230V_50Hz BLUE BROWN
S502 S503
HALL SENSOR MAIN COIL ROTOR MAGNET MR FG SENSOR
VCC
HALL VCC HALL IN OUT SWITCH LOGIC
CP3001
CAP FG CAP VCO VCC CAP.M/F/R I LIMIT MOTOR GND GND LD/CY VCO CAP CTL LDM CTL CYL FG/PG CYL CTL
CAPSTAN DD UNIT M2001
FFC
RED WHITE
LOADING MOTOR M101
D-PG GND D-PG OUT M-GND D-COM D-W OUT D-V OUT D-U OUT
UN4001 CYLINDER UNIT
CP101 FPC
HF1 (R) HF COM HF2 (L) SP-CH1 (R) SP COM SP-CH2 (L) EP/LP-CH1 (R) EP/LP COM EP/LP-CH2 (L)
HI-FI HEAD
SP HEAD
EP/LP HEAD
CP8003
SCL RADIO PLL SDA RADIO L RADIO CS RADIO R FM DET P.CON+9V RADIO SD P.CON+12V GND
TU302 FM
FM ANT
GND AM
AM LOOP ANT
CD5507 CD5506
-Vs -Vs -Vs +Vs +Vs +Vs
WHITE RED
SP-SR SP-SL SP-C SP-FR SP-FL
SATELLITE SPEAKER J5502
SPEAKER MAIN PCB PCBD30 VPC165
CP5502 AC 18V GND AC 18V
CD5501 SPEAKER+5V GND
CP550A GND DIN-SW MUTE-H SPEAKER5V
SPEAKER POWER PCB PCBD40 VPC166
CD5403 AC 18V GND AC 18V
CP5402 SPEAKER+5V GND
CP5401
CD5401 AC230V_50Hz BLUE BROWN
CP5505 CP5504
SUB WOOFER
SPEAKER WOOFER PCB PCBD50 VPC171
CP5508 GND DIN-SW MUTE-H SPEAKER5V
CP5503 AC 35V GND AC 35V
CD5404 AC 35V GND AC 35V

NOTE: THIS INTERCONNECTION DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

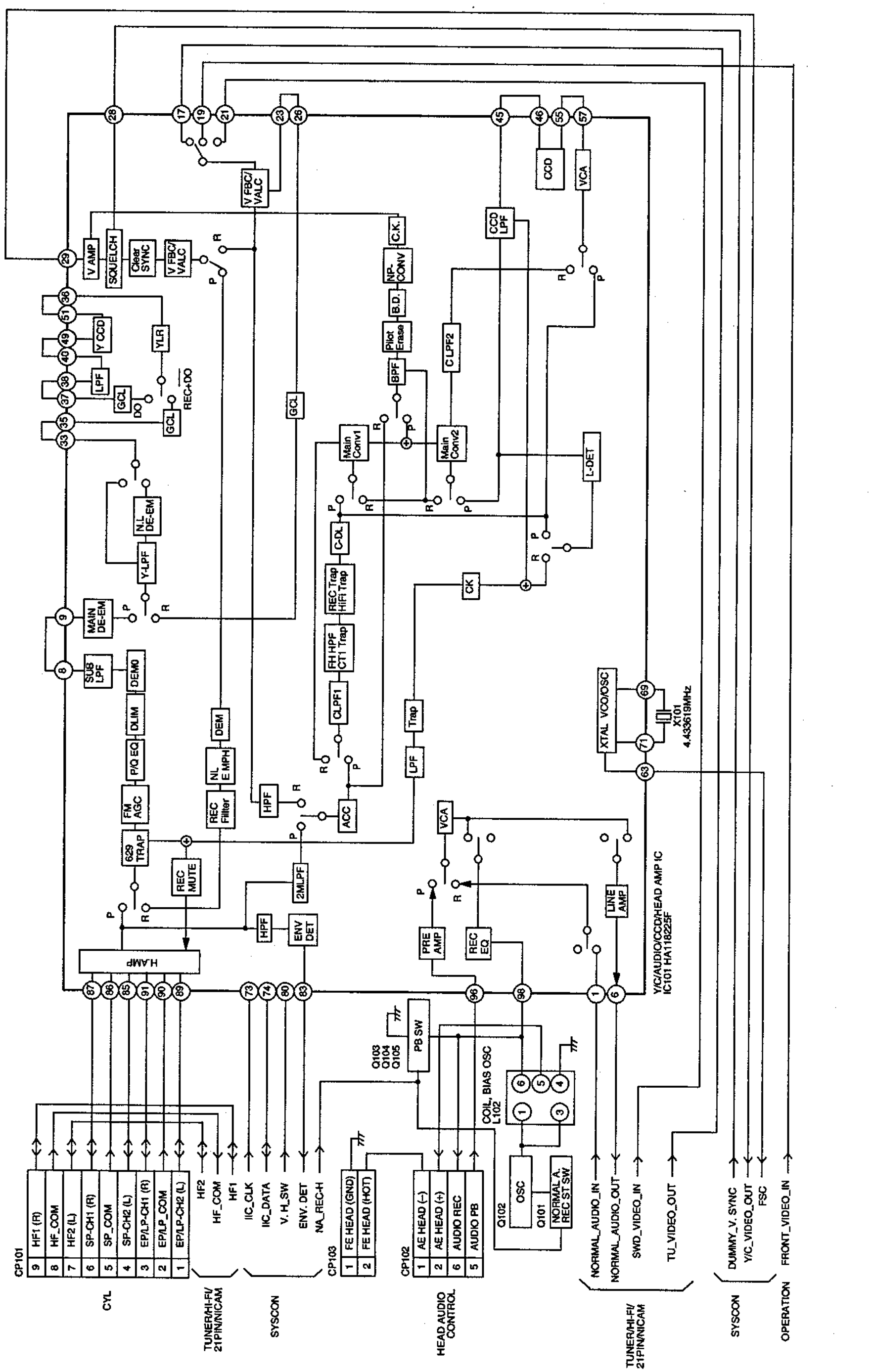
CAUTION :SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION :LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE NÍUTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

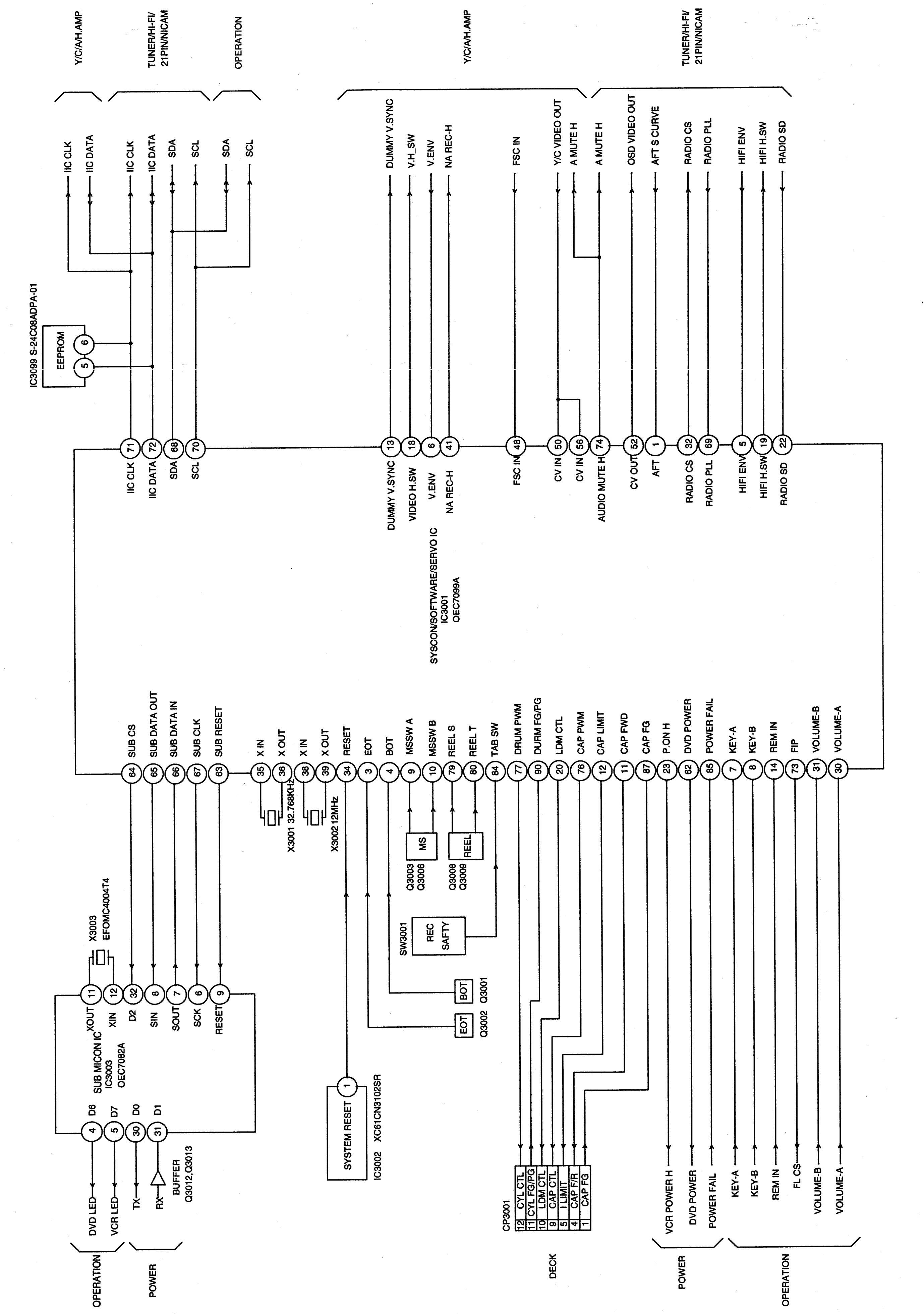
BLOCK DIAGRAM (DVD)


VCR BLOCK
TX
RX
P.CON+3.3V
P.CON+5V
P.CON+9V
CP4002
CP8102
DVD RESET
DVD VIDEO
L AUDIO
R AUDIO
AUDIO C
AUDIO LS
AUDIO RS
AUDIO LFE
SYSTEM MUTE
CP8101
DVD_R
DVD_G
DVD_B
Y/C SEPA
J8101
DAC D
S-VIDEO/RGB SELECTOT
SW8101
REG+1.8V
IC4003
PQ070XZ1ZP
6ch DAC
IC7301
PCM1602Y
SDRAM 64M
IC4005
M12L64164A-7T
SDA0~SDA11
SDD0~SDD15
FLASH 8M
IC4007
SST39VF800A_70-4C-EK
HA0 ~ HA20
HD0 ~ HD15
MPEG Decoder
W/Video Encoder
W/u-CON
W/DSP
IC4001
ZR36768(Vaddis 6E)
I²CLK
I²DAT
EEPROM
IC4002
S-24C04BFJ-TB
DVD VIDEO A
DVD VIDEO B
DVD VIDEO C
ASDATA0, 1, 2
AMCLK
ABCLK
ALRCLK
MC, ML, MD
RFA, SDEN, DATA, SCLK
AAF, CE, FE, TE, PI
FNN, FNP
VBIAS0, S1
DEFECT, LINK, MIRR, LDON
SPDL_SENS
HOME, TIN SW, TOUT SW
SPINDLE, SLED_PWM
TRACK, FOCUS_PWM
ADC IN 5, 6, 7
S MUTE
READ CHANNEL
IC2601
ZR36707TQC
Dual OP-AMP
IC2602
BA10358F-E2
Motor Driver
IC2301
LA6560
A, B, C, D, E, F
RF
CD, DVD, LD
SPDL+/-
TR+/-, FO+/-
SPDL+/-, SLED+/-
DVD LOADER
DM II
Pick up
Loading Motor
Spindle/ Sled Motor

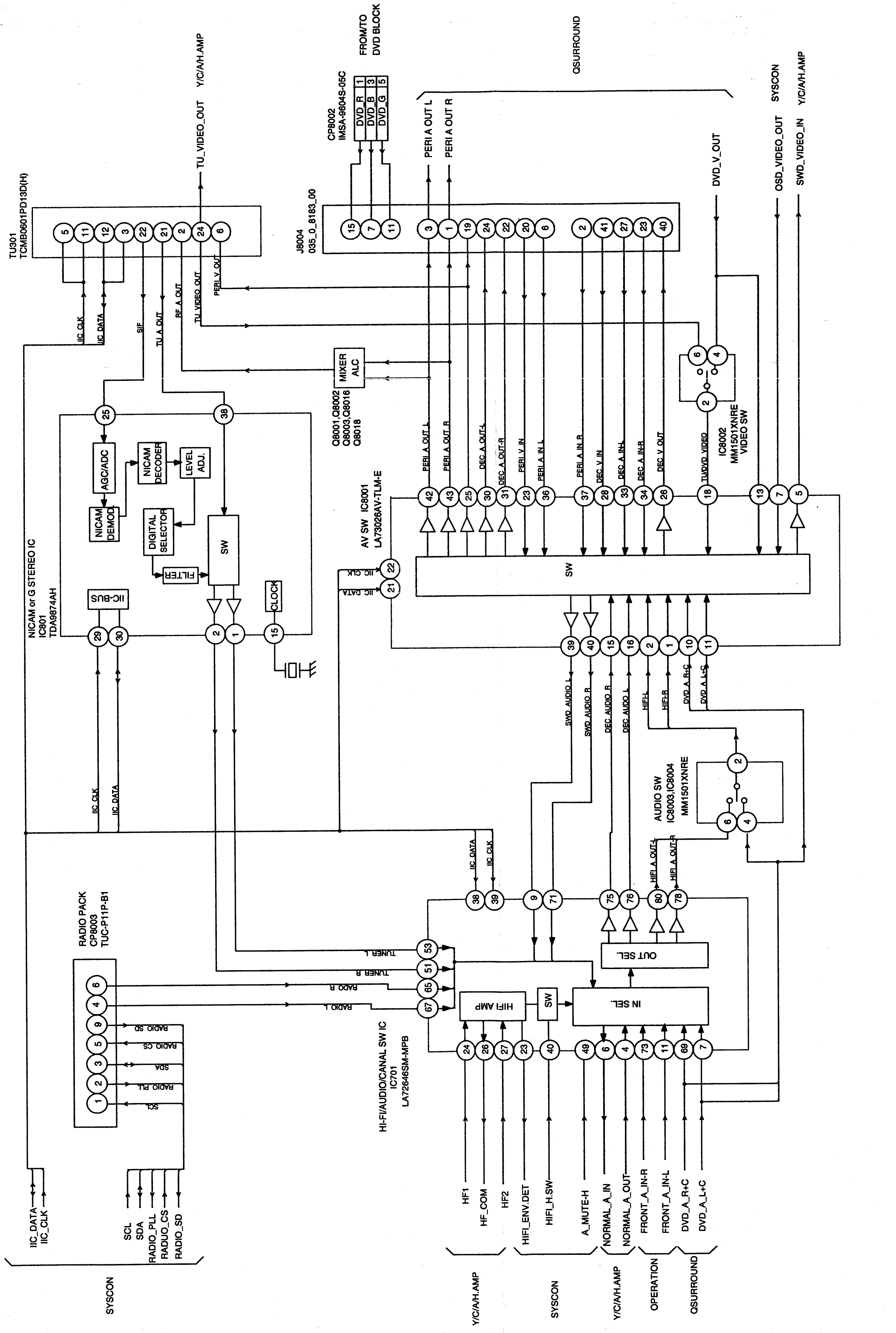
BLOCK DIAGRAM (Y/C/AUDIO/HEAD AMP)


V AMP
SQUELCH
Clear SYNC
V FBC/ VALC
YLR
Y CCD
LPF
GCL
REC+DO
N.L DE-EM
Y-LPF
MAIN DE-EM
SUB LPF
DEMO
DLIM
P/Q EQ
FM AGC
629 TRAP
REC MUTE
REC Filter
NL E MPH
DEM
HPF
ACC
2MLPF
ENV DET
H.AMP
C.K.
NP-CONV
B.D.
Pilot Erase
BPF
Main Conv1
Main Conv2
C LPF2
C-DL
REC Trap HiFi Trap
FH HPF CT1 Trap
CLPF1
Trap
LPF
CK
CCD LPF
CCD
VCA
L-DET
XTAL VCO/OSC
X101
4.433619MHz
PRE AMP
REC EQ
LINE AMP
Y/C/AUDIO/CCD/HEAD AMP IC
IC101 HA118225F
PB SW
Q103
Q104
Q105
COIL, BIAS OSC
L102
OSC
Q101
NORMAL A. REC ST SW
Q102
CP101
HF1 (R)
HF_COM
HF2 (L)
SP-CH1 (R)
SP_COM
SP-CH2 (L)
EP/LP-CH1 (R)
EP/LP_COM
EP/LP-CH2 (L)
HF2
HF_COM
HF1
IIC_CLK
IIC_DATA
V. H_SW
ENV. DET
NA_REC-H
CP103
FE HEAD (GND)
FE HEAD (HOT)
CP102
AE HEAD (-)
AE HEAD (+)
AUDIO REC
AUDIO PB
NORMAL_AUDIO_IN
NORMAL_AUDIO_OUT
SWD_VIDEO_IN
TU_VIDEO_OUT
DUMMY_V. SYNC
Y/C_VIDEO_OUT
FSC
FRONT_VIDEO_IN
CYL
TUNER/HI-FI/ 21PIN/NICAM
SYSCON
HEAD AUDIO CONTROL
TUNER/HI-FI/ 21PIN/NICAM
SYSCON
OPERATION
R
P

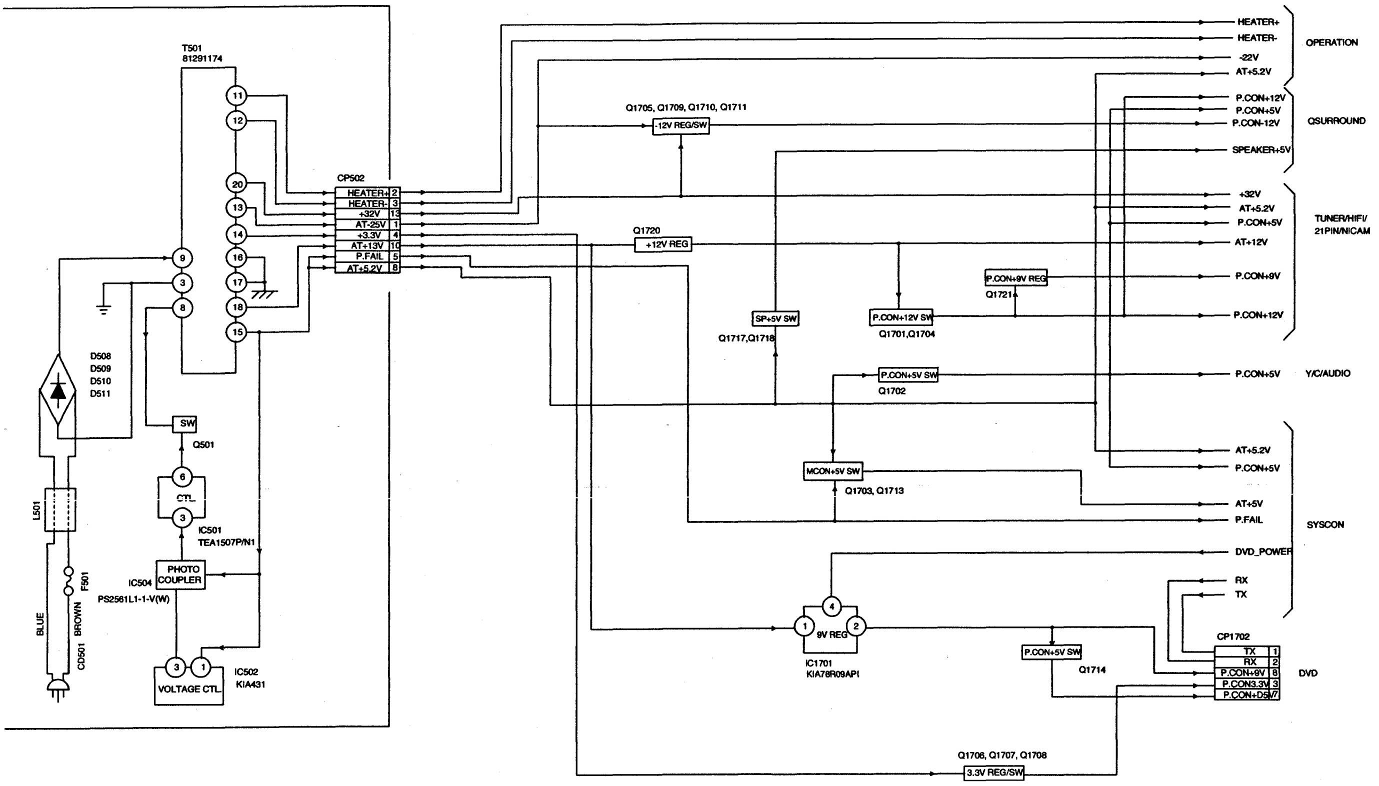
BLOCK DIAGRAM (SYSCON)


Y/C/A/H.AMP
TUNER/Hi-Fi/ 21PIN/NICAM
OPERATION
IC3099 S-24C08ADPA-01
EEPROM
IIC CLK
IIC DATA
SDA
SCL
DUMMY V.SYNC
V.H_SW
V.ENV
NA REC-H
FSC IN
Y/C VIDEO OUT
A MUTE H
OSD VIDEO OUT
AFT S CURVE
RADIO CS
RADIO PLL
HIFI ENV
HIFI H.SW
RADIO SD
VIDEO H.SW
CV IN
AUDIO MUTE H
CV OUT
AFT
SYSCON/SOFTWARE/SERVO IC
IC3001
OEC7099A
SUB CS
SUB DATA OUT
SUB DATA IN
SUB CLK
SUB RESET
X IN
X OUT
RESET
EOT
BOT
MSSW A
MSSW B
REEL S
REEL T
TAB SW
DRUM PWM
DURM FG/PG
LDM CTL
CAP PWM
CAP LIMIT
CAP FWD
CAP FG
P.ON H
DVD POWER
POWER FAIL
KEY-A
KEY-B
REM IN
FIP
VOLUME-B
VOLUME-A
X3001 32.768KHz
X3002 12MHz
MS
Q3003 Q3006
REEL
Q3008 Q3009
SW3001
REC SAFTY
BOT Q3001
EOT Q3002
X3003 EFOMC4004T4
SUB MICON IC
IC3003
OEC7082A
XOUT
XIN
D2
SIN
SOUT
SCK
RESET
D6
D7
D0
D1
SYSTEM RESET
IC3002 XC61CN3102SR
CP3001
12 CYL CTL
11 CYL FG/PG
10 LDM CTL
9 CAP CTL
5 I LIMIT
4 CAP F/R
1 CAP FG
DVD LED
VCR LED
TX
RX
BUFFER Q3012,Q3013
VCR POWER H
DVD POWER
POWER FAIL
KEY-A
KEY-B
REM IN
FL CS
VOLUME-B
VOLUME-A
OPERATION
POWER
DECK
POWER
OPERATION

BLOCK DIAGRAM (TUNER/Hi-Fi/21 PIN/NICAM)

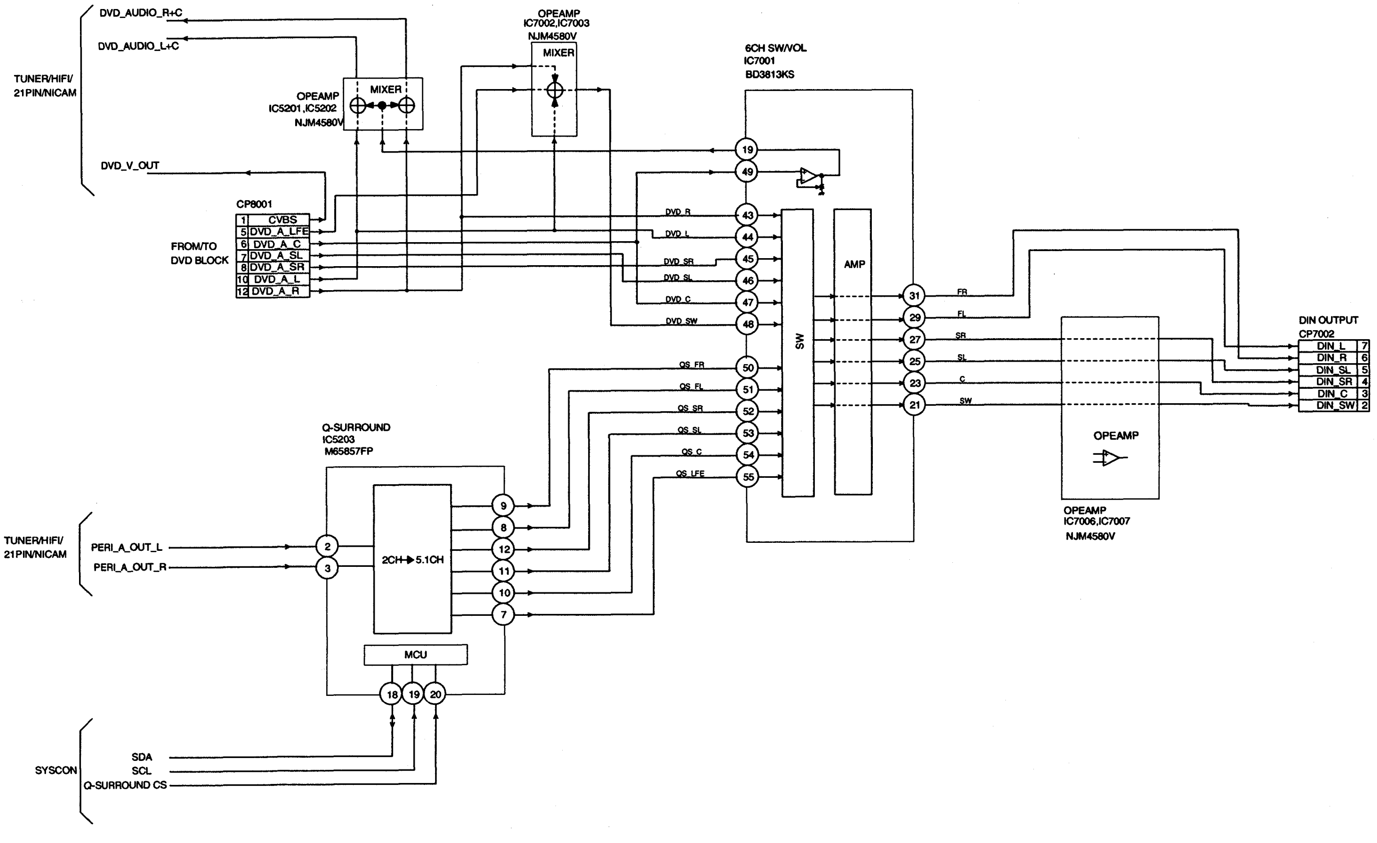

TU_VIDEO_OUT
Y/C/A/H.AMP
TU301
TCMB0601PD13D(H)
IIC CLK
IIC DATA
SIF
TU A OUT
RF A OUT
TU VIDEO OUT
PERI V OUT
FROM/TO DVD BLOCK
CP8002
IMSA-9604S-05C
DVD R
DVD B
DVD G
J8004
035_0_8183_00
PERI A OUT L
PERI A OUT R
QSURROUND
DVD_V_OUT
SYSCON
OSD_VIDEO_OUT
SWD_VIDEO_IN
Y/C/A/H.AMP
MIXER ALC
Q8001,Q8002 Q8003,Q8016 Q8018
IC8002 MM1501XNRE VIDEO SW
AV SW IC8001 LA73026AV-TLM-E
SW
IIC CLK
IIC DATA
NICAM or G STEREO IC
IC301
TDA9874AH
AGC/ADC
NICAM DECODER
LEVEL ADJ.
NICAM DEMOD
DIGITAL SELECTOR
FILTER
SW
IIC-BUS
CLOCK
SWD AUDIO L
SWD AUDIO R
DEC AUDIO R
DEC AUDIO L
HIFI-L
HIFI-R
DVD A R+C
DVD A L+C
AUDIO SW IC8003,IC8004 MM1501XNRE
HIFI A OUT-L
HIFI A OUT-R
RADIO PACK
CP8003
TUC-P11P-B1
RADIO SD
RADIO CS
SDA
RADIO PLL
SCL
TUNER L
TUNER R
RADIO R
RADIO L
OUT SEL
HIFI AMP
SW
IN SEL
HI-FI/AUDIO/CANAL SW IC
IC701
LA72646M-MPB
IIC_DATA
IIC_CLK
SCL
SDA
RADIO_PLL
RADUO_CS
RADIO_SD
HF1
HF_COM
HF2
HIFI_ENV.DET
HIFI_H.SW
A_MUTE-H
NORMAL_A_IN
NORMAL_A_OUT
FRONT_A_IN-R
FRONT_A_IN-L
DVD_A_R+C
DVD_A_L+C
SYSCON
Y/C/A/H.AMP
SYSCON
Y/C/A/H.AMP
OPERATION
QSURROUND

BLOCK DIAGRAM (POWER)



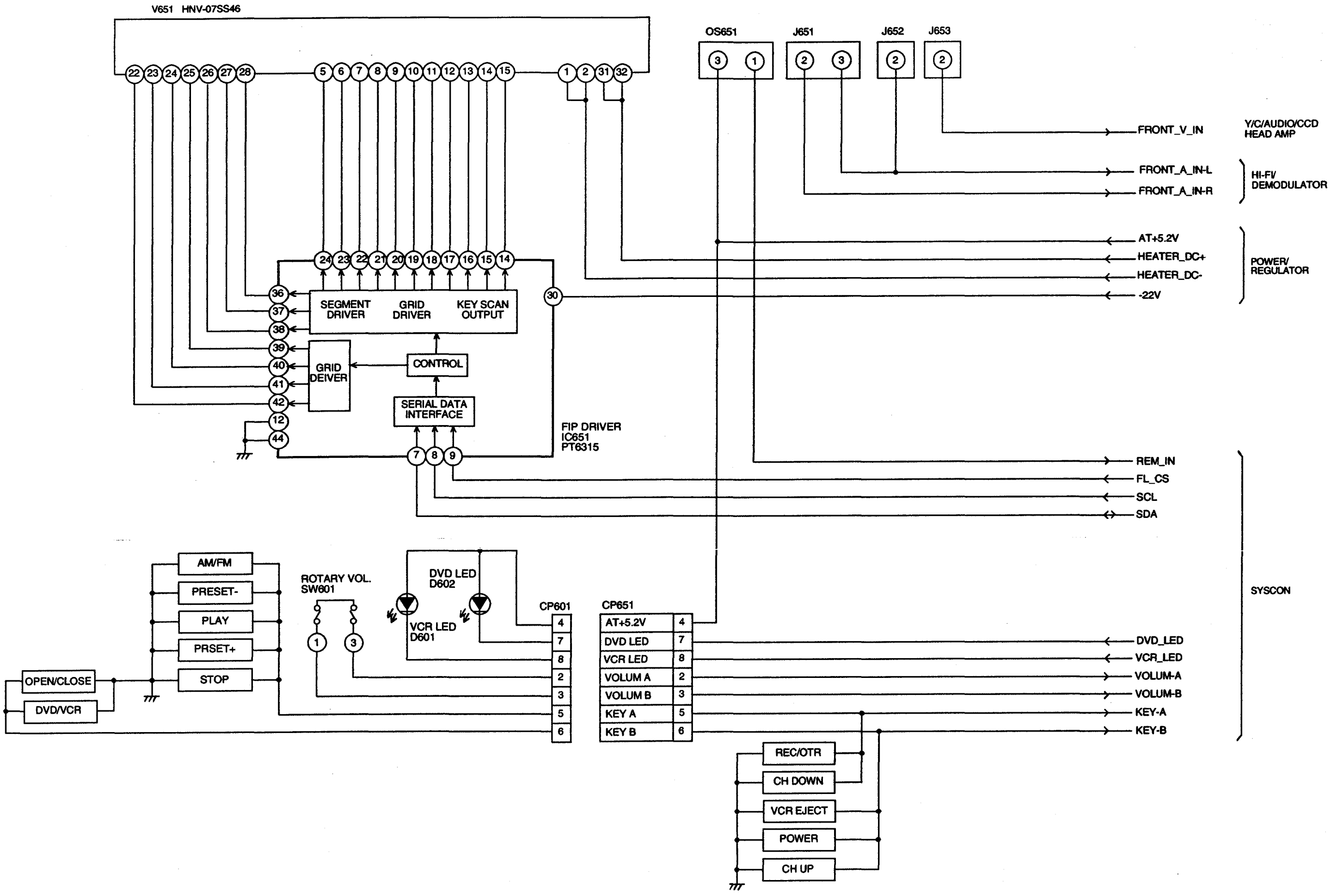
T501
81291174
CP502
HEATER+ 2
HEATER- 3
+32V 13
AT-25V 1
+3.3V 4
AT+13V 10
P.FAIL 5
AT+5.2V 8
D508
D509
D510
D511
L501
F501
BLUE
BROWN
CD501
SW
Q501
CTL
IC501
TEA1507P/N1
PHOTO COUPLER
IC504
PS2561L1-1-V(W)
VOLTAGE CTL
IC502
KIA431
Q1705, Q1709, Q1710, Q1711
-12V REG/SW
Q1720
+12V REG
SP+5V SW
Q1717,Q1718
P.CON+12V SW
Q1701,Q1704
P.CON+9V REG
Q1721
P.CON+5V SW
Q1702
MCON+5V SW
Q1703, Q1713
9V REG
IC1701
KIA78R09API
P.CON+5V SW
Q1714
Q1706, Q1707, Q1708
3.3V REG/SW
CP1702
TX 1
RX 2
P.CON+9V 8
P.CON3.3V 3
P.CON+D5V 7
HEATER+
HEATER-
-22V
AT+5.2V
OPERATION
P.CON+12V
P.CON+5V
P.CON-12V
SPEAKER+5V
QSURROUND
+32V
AT+5.2V
P.CON+5V
AT+12V
P.CON+9V
P.CON+12V
TUNER/HIFI/ 21PIN/NICAM
P.CON+5V
Y/C/AUDIO
AT+5.2V
P.CON+5V
AT+5V
P.FAIL
DVD_POWER
RX
TX
SYSCON
DVD

BLOCK DIAGRAM (QSURROUND)

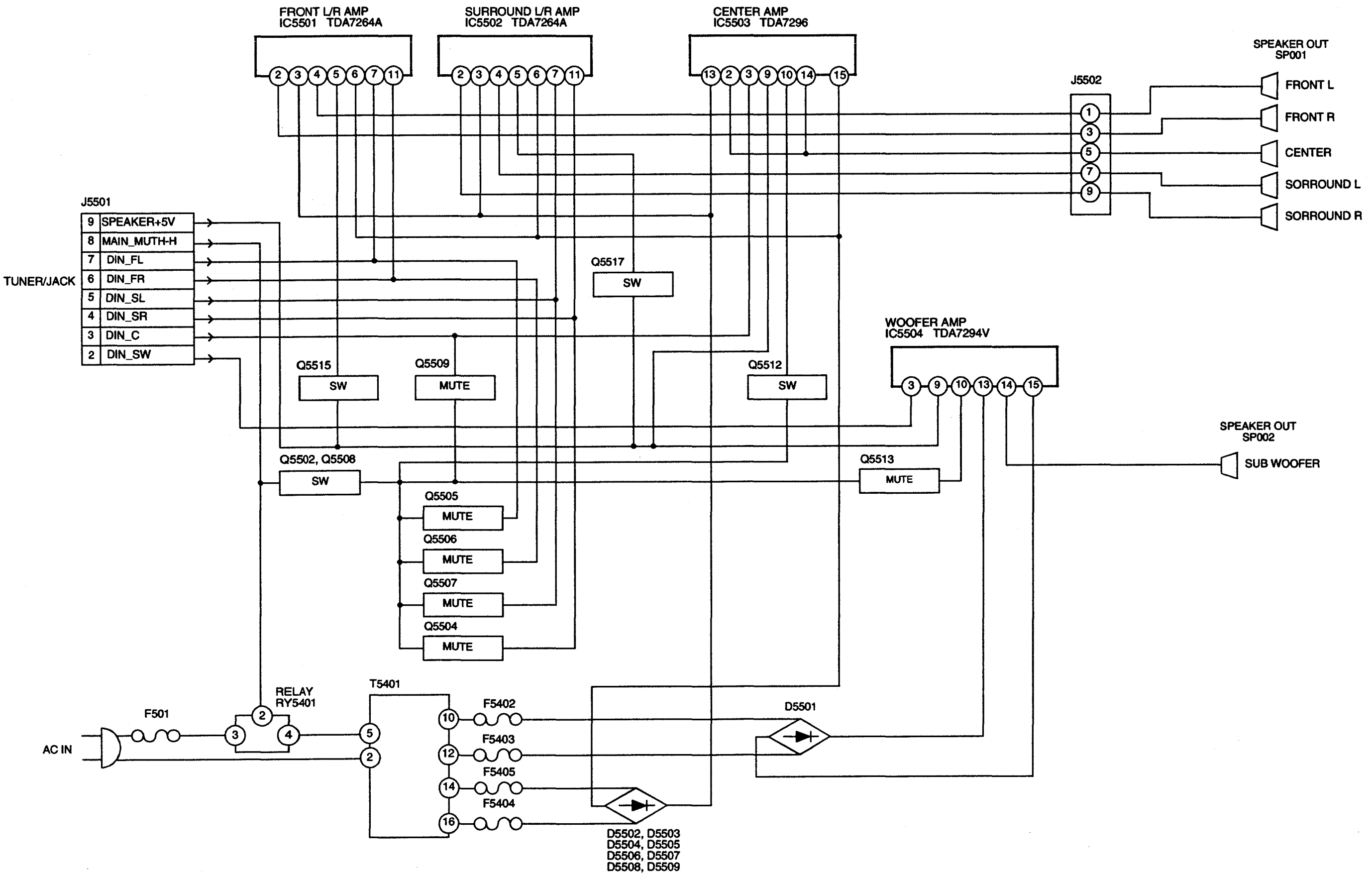


DVD_AUDIO_R+C
DVD_AUDIO_L+C
TUNER/HIFI/ 21PIN/NICAM
DVD_V_OUT
OPEAMP
IC5201,IC5202
NJM4580V
MIXER
OPEAMP
IC7002,IC7003
NJM4580V
MIXER
6CH SW/VOL
IC7001
BD3813KS
CP8001
1 CVBS
5 DVD_A_LFE
6 DVD_A_C
7 DVD_A_SL
8 DVD_A_SR
10 DVD_A_L
12 DVD_A_R
FROM/TO DVD BLOCK
DVD_R
DVD_L
DVD_SR
DVD_SL
DVD_C
DVD_SW
QS_FR
QS_FL
QS_SR
QS_SL
QS_C
QS_LFE
SW
AMP
FR
FL
SR
SL
C
SW
OPEAMP
OPEAMP
IC7006,IC7007
NJM4580V
DIN OUTPUT
CP7002
DIN_L 7
DIN_R 6
DIN_SL 5
DIN_SR 4
DIN_C 3
DIN_SW 2
Q-SURROUND
IC5203
M65857FP
2CH→5.1CH
MCU
TUNER/HIFI/ 21PIN/NICAM
PERI_A_OUT_L
PERI_A_OUT_R
SYSCON
SDA
SCL
Q-SURROUND CS

BLOCK DIAGRAM (OPERATION)

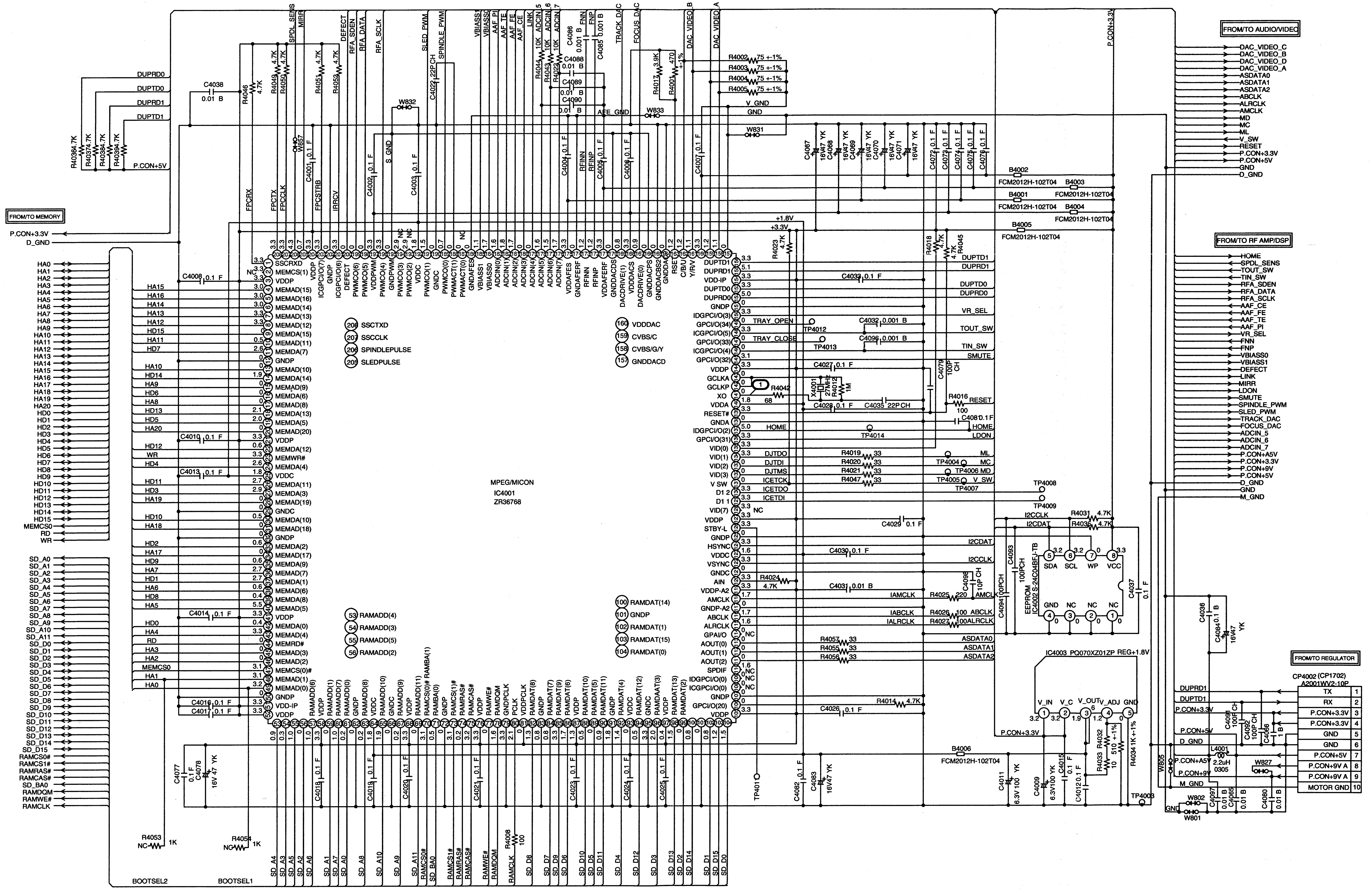

V651 HNV-07SS46
OS651
J651
J652
J653
FRONT_V_IN
Y/C/AUDIO/CCD HEAD AMP
FRONT_A_IN-L
FRONT_A_IN-R
HI-FI/ DEMODULATOR
AT+5.2V
HEATER_DC+
HEATER_DC-
-22V
POWER/ REGULATOR
SEGMENT DRIVER
GRID DRIVER
KEY SCAN OUTPUT
GRID DEIVER
CONTROL
SERIAL DATA INTERFACE
FIP DRIVER
IC651
PT6315
REM_IN
FL_CS
SCL
SDA
SYSCON
AM/FM
PRESET-
PLAY
PRSET+
STOP
OPEN/CLOSE
DVD/VCR
ROTARY VOL.
SW601
DVD LED
D602
VCR LED
D601
CP601
CP651
AT+5.2V
DVD LED
VCR LED
VOLUM A
VOLUM B
KEY A
KEY B
DVD_LED
VCR_LED
VOLUM-A
VOLUM-B
KEY-A
KEY-B
REC/OTR
CH DOWN
VCR EJECT
POWER
CH UP

BLOCK DIAGRAM (SPEAKER)


FRONT L/R AMP
IC5501 TDA7264A
SURROUND L/R AMP
IC5502 TDA7264A
CENTER AMP
IC5503 TDA7296
SPEAKER OUT
SP001
J5502
FRONT L
FRONT R
CENTER
SORROUND L
SORROUND R
J5501
9 SPEAKER+5V
8 MAIN_MUTH-H
7 DIN_FL
6 DIN_FR
5 DIN_SL
4 DIN_SR
3 DIN_C
2 DIN_SW
TUNER/JACK
Q5517
SW
WOOFER AMP
IC5504 TDA7294V
Q5515
SW
Q5509
MUTE
Q5512
SW
SPEAKER OUT
SP002
SUB WOOFER
Q5502, Q5508
SW
Q5513
MUTE
Q5505
MUTE
Q5506
MUTE
Q5507
MUTE
Q5504
MUTE
F501
RELAY
RY5401
T5401
AC IN
F5402
F5403
F5405
F5404
D5501
D5502, D5503
D5504, D5505
D5506, D5507
D5508, D5509

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (MPRG/MICON)

Show page 115 - 119 the waveform of ○ mark position.



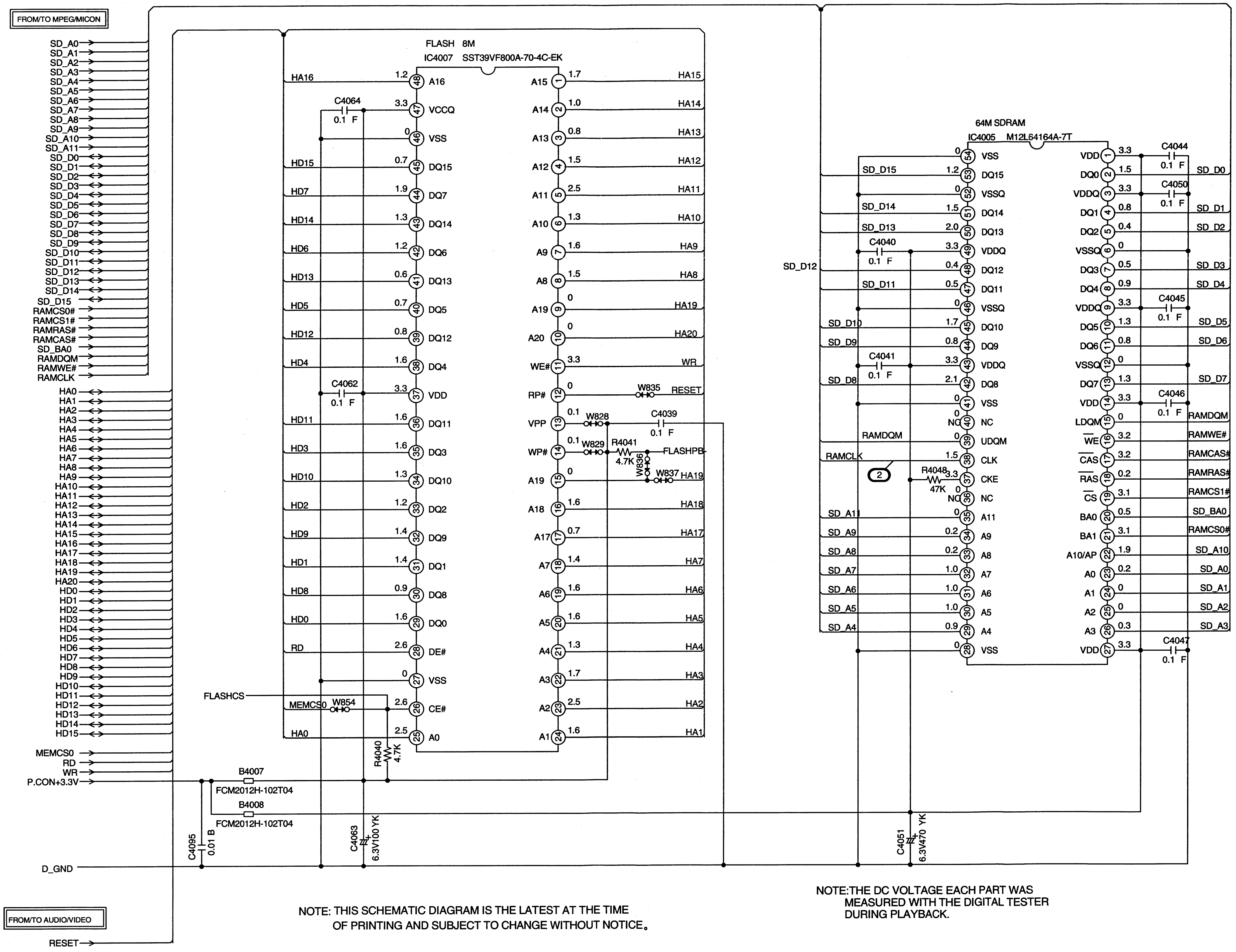
FROM/TO MEMORY
P.CON+3.3V
D_GND
FROM/TO AUDIO/VIDEO
DAC_VIDEO_C
DAC_VIDEO_B
DAC_VIDEO_D
DAC_VIDEO_A
ASDATA0
ASDATA1
ASDATA2
ABCLK
ALRCLK
AMCLK
MD
MC
ML
V_SW
RESET
P.CON+3.3V
P.CON+5V
GND
D_GND
FROM/TO RF AMP/DSP
HOME
SPDL_SENS
TOUT_SW
TIN_SW
RFA_SDEN
RFA_DATA
RFA_SCLK
AAF_CE
AAF_FE
AAF_TE
AAF_PI
VR_SEL
FNN
FNP
VBIASS0
VBIASS1
DEFECT
LINK
MIRR
LDON
SMUTE
SPINDLE_PWM
SLED_PWM
TRACK_DAC
FOCUS_DAC
ADCIN_5
ADCIN_6
ADCIN_7
P.CON+A5V
P.CON+3.3V
P.CON+9V
P.CON+5V
D_GND
GND
M_GND
FROM/TO REGULATOR
CP4002 (CP1702)
A2001WV2-10P
TX
RX
P.CON+3.3V
P.CON+3.3V
GND
GND
P.CON+5V
P.CON+9V A
P.CON+9V A
MOTOR GND
MPEG/MICON
IC4001
ZR36768
EEPROM
IC4002 S-24C04BFJ-TB
IC4003 PQ070XZ01ZP REG+1.8V
X4001 27MHz
BOOTSEL2
BOOTSEL1

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (MEMORY)

Show page 115 - 119 the waveform of ○ mark position.

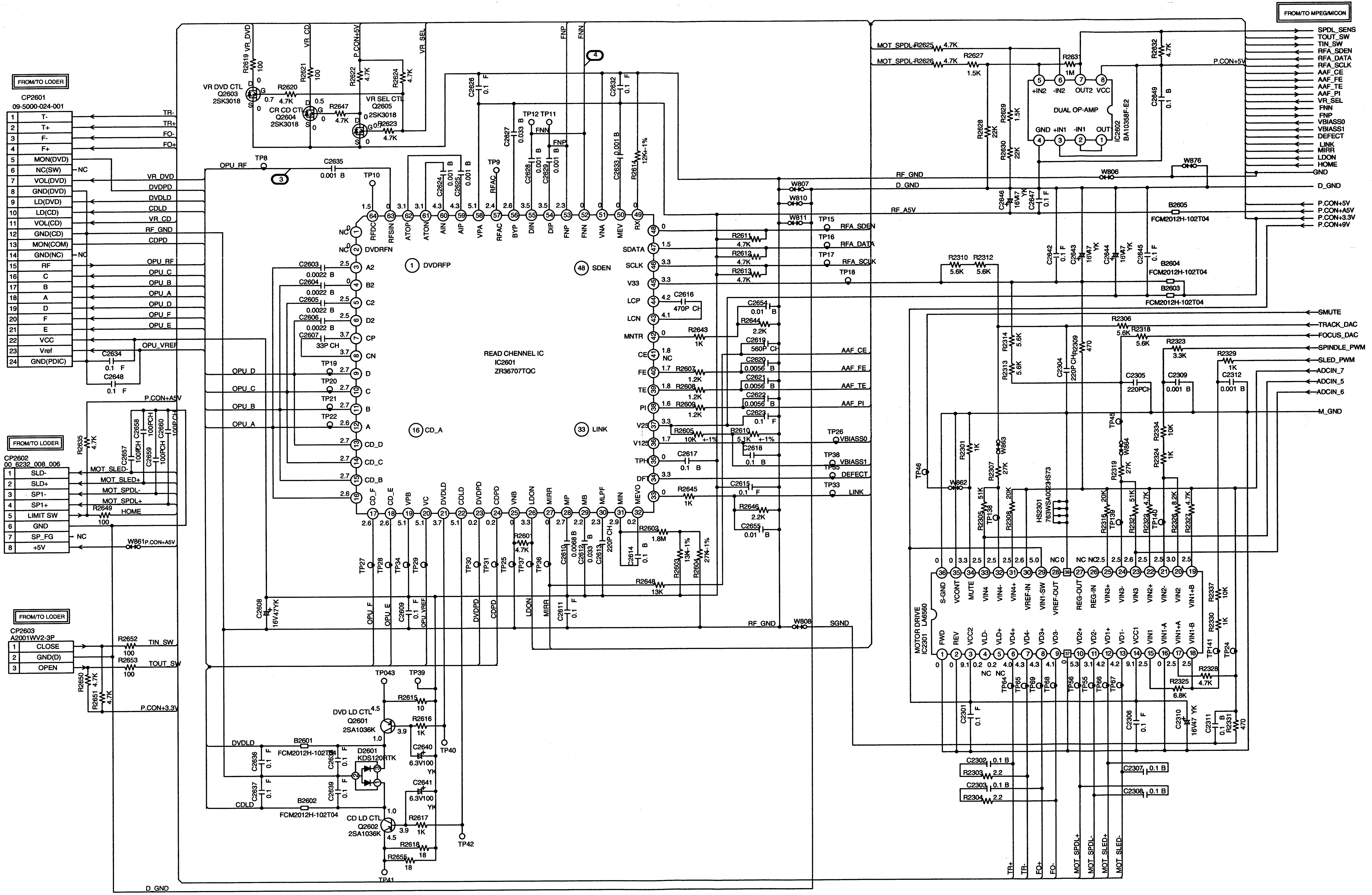

FROM/TO MPEG/MICON
SD_A0 SD_A1 SD_A2 SD_A3 SD_A4 SD_A5 SD_A6 SD_A7 SD_A8 SD_A9 SD_A10 SD_A11
SD_D0 SD_D1 SD_D2 SD_D3 SD_D4 SD_D5 SD_D6 SD_D7 SD_D8 SD_D9 SD_D10 SD_D11 SD_D12 SD_D13 SD_D14 SD_D15
RAMCS0# RAMCS1# RAMRAS# RAMCAS# SD_BA0 RAMDQM RAMWE# RAMCLK
HA0 HA1 HA2 HA3 HA4 HA5 HA6 HA7 HA8 HA9 HA10 HA11 HA12 HA13 HA14 HA15 HA16 HA17 HA18 HA19 HA20
HD0 HD1 HD2 HD3 HD4 HD5 HD6 HD7 HD8 HD9 HD10 HD11 HD12 HD13 HD14 HD15
MEMCS0 RD WR P.CON+3.3V
D_GND
FROM/TO AUDIO/VIDEO
RESET
FLASH 8M
IC4007 SST39VF800A-70-4C-EK
A16 VCCQ VSS DQ15 DQ7 DQ14 DQ6 DQ13 DQ5 DQ12 DQ4 VDD DQ11 DQ3 DQ10 DQ2 DQ9 DQ1 DQ8 DQ0 DE# VSS CE# A0
A15 A14 A13 A12 A11 A10 A9 A8 A19 A20 WE# RP# VPP WP# A19 A18 A17 A7 A6 A5 A4 A3 A2 A1
C4064 0.1 F
C4062 0.1 F
C4039 0.1 F
W835 RESET
W828
W829 R4041 4.7K FLASHPB
W836 W837
W854
FLASHCS
R4040 4.7K
B4007 FCM2012H-102T04
B4008 FCM2012H-102T04
C4095 0.01 B
C4063 6.3V100 YK
64M SDRAM
IC4005 M12L64164A-7T
VSS DQ15 VSSQ DQ14 DQ13 VDDQ DQ12 DQ11 VSSQ DQ10 DQ9 VDDQ DQ8 VSS NC UDQM CLK CKE NC A11 A9 A8 A7 A6 A5 A4 VSS
VDD DQ0 VDDQ DQ1 DQ2 VSSQ DQ3 DQ4 VDDQ DQ5 DQ6 VSSQ DQ7 VDD LDQM WE CAS RAS CS BA0 BA1 A10/AP A0 A1 A2 A3 VDD
C4040 0.1 F
C4041 0.1 F
C4044 0.1 F
C4050 0.1 F
C4045 0.1 F
C4046 0.1 F
C4047 0.1 F
R4048 47K
②
C4051 6.3V470 YK

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (RF AMP/DSP)

Show page 115 - 119 the waveform of ○ mark position.


FROM/TO LODER
CP2601
09-5000-024-001
1 T-
2 T+
3 F-
4 F+
5 MON(DVD)
6 NC(SW)
7 VOL(DVD)
8 GND(DVD)
9 LD(DVD)
10 LD(CD)
11 VOL(CD)
12 GND(CD)
13 MON(COM)
14 GND(NC)
15 RF
16 C
17 B
18 A
19 D
20 F
21 E
22 VCC
23 Vref
24 GND(PDIC)
FROM/TO LODER
CP2602
00_6232_008_006
1 SLD-
2 SLD+
3 SP1-
4 SP1+
5 LIMIT SW
6 GND
7 SP_FG
8 +5V
FROM/TO LODER
CP2603
A2001WV2-3P
1 CLOSE
2 GND(D)
3 OPEN
VR DVD CTL
Q2603
2SK3018
CR CD CTL
Q2604
2SK3018
VR SEL CTL
Q2605
2SK3018
READ CHENNEL IC
IC2601
ZR36707TQC
DVD LD CTL
Q2601
2SA1036K
CD LD CTL
Q2602
2SA1036K
D2601
KDS120RTK
DUAL OP-AMP
IC2602
BA10358F-E2
MOTOR DRIVE
IC2301 LA6560
HS2301
763WSA0023HS73
FROM/TO MPEG/MICON
SPDL_SENS
TOUT_SW
TIN_SW
RFA_SDEN
RFA_DATA
RFA_SCLK
AAF_CE
AAF_FE
AAF_TE
AAF_PI
VR_SEL
FNN
FNP
VBIASS0
VBIASS1
DEFECT
LINK
MIRR
LDON
HOME
GND
D_GND
P.CON+5V
P.CON+A5V
P.CON+3.3V
P.CON+9V
SMUTE
TRACK_DAC
FOCUS_DAC
SPINDLE_PWM
SLED_PWM
ADCIN_7
ADCIN_5
ADCIN_6
M_GND
TR+
TR-
FO+
FO-
MOT_SPDL+
MOT_SPDL-
MOT_SLED+
MOT_SLED-
D_GND

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

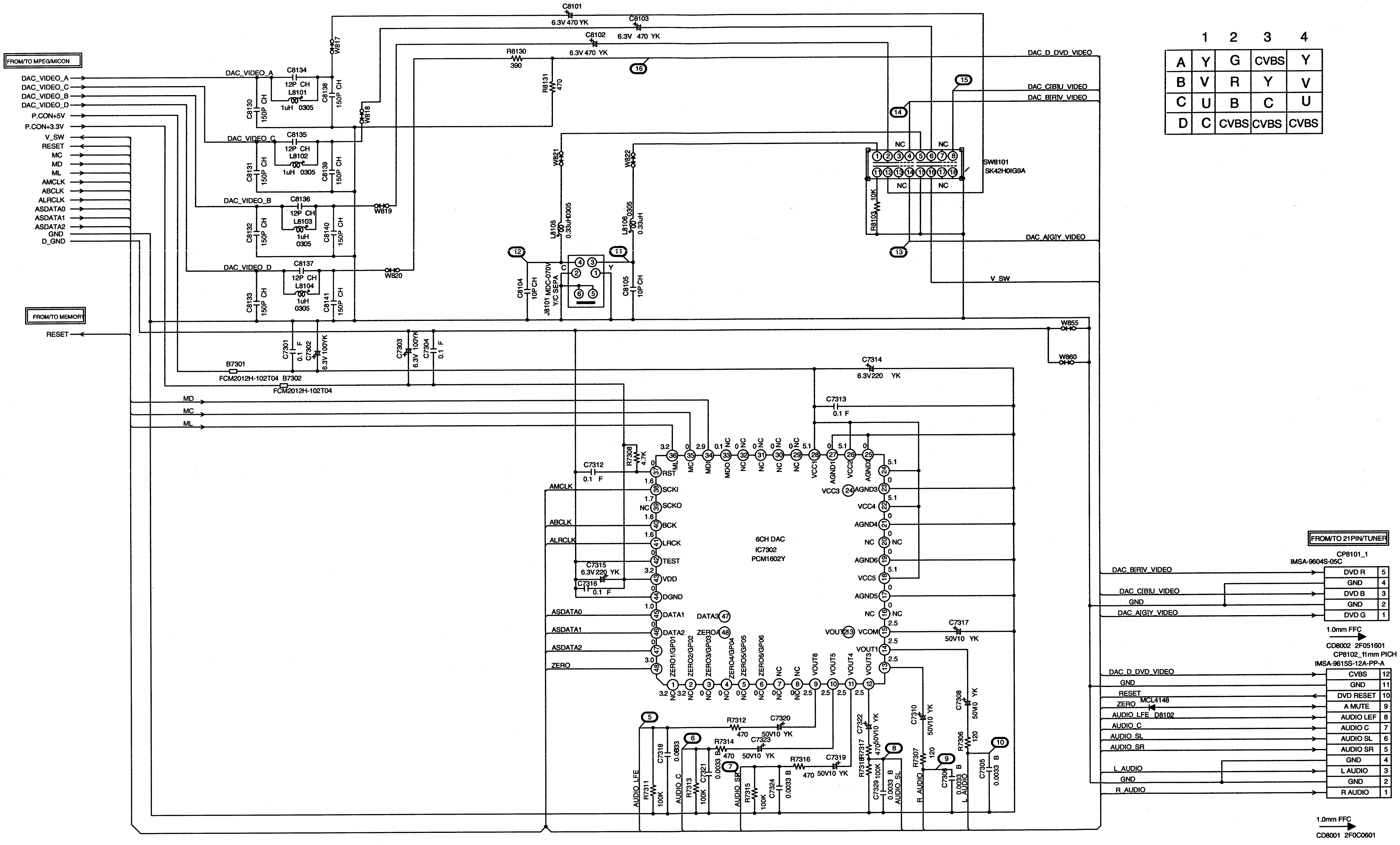
NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

CAUTION :SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION :LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE NIUTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (AUDIO/VIDEO)

Show page 115 - 119 the waveform of ○ mark position.



FROM/TO MPEG/MICON
DAC_VIDEO_A
DAC_VIDEO_C
DAC_VIDEO_B
DAC_VIDEO_D
P.CON+5V
P.CON+3.3V
V_SW
RESET
MC
MD
ML
AMCLK
ABCLK
ALRCLK
ASDATA0
ASDATA1
ASDATA2
GND
D_GND
FROM/TO MEMORY
RESET
C8101 6.3V 470 YK
C8102 6.3V 470 YK
C8103 6.3V 470 YK
R8130 390
R8131 470
C8134 12P CH
L8101 1uH 0305
C8135 12P CH
L8102 1uH 0305
C8136 12P CH
L8103 1uH 0305
C8137 12P CH
L8104 1uH 0305
C8130 150P CH
C8131 150P CH
C8132 150P CH
C8133 150P CH
C8138 150P CH
C8139 150P CH
C8140 150P CH
C8141 150P CH
W817
W818
W819
W820
W821
W822
L8105 0.33uH0305
L8106 0.33uH 0305
C8104 10P CH
C8105 10P CH
J8101 MDC-070V Y/C SEPA
SW8101 SK42H0IG9A
R8103 10K
DAC_D_DVD_VIDEO
DAC_C[B]U_VIDEO
DAC_B[R]V_VIDEO
DAC_A[G]Y_VIDEO
V_SW
W855
W860
B7301 FCM2012H-102T04
B7302 FCM2012H-102T04
C7301 0.1 F
C7302 6.3V 100YK
C7303 6.3V 100YK
C7304 0.1 F
C7314 6.3V220 YK
C7313 0.1 F
C7312 0.1 F
C7315 6.3V 220 YK
C7316 0.1 F
R7308 4.7K
6CH DAC
IC7302
PCM1602Y
C7317 50V10 YK
R7312 470
C7320 50V10 YK
R7314 470
C7323 50V10 YK
R7316 470
C7319 50V10 YK
C7318 0.0033 B
C7321 0.0033 B
C7324 0.0033 B
R7311 100K
R7313 100K
R7315 100K
R7317 100K
C7322 50V10 YK
C7329 0.0033 B
C7310 50V10 YK
C7308 50V10 YK
R7306 120
R7307 120
C7309 0.0033 B
C7305 0.0033 B
AUDIO_LFE
AUDIO_C
AUDIO_SR
AUDIO_SL
R_AUDIO
L_AUDIO
FROM/TO 21PIN/TUNER
CP8101_1
IMSA-9604S-05C
DVD R 5
GND 4
DVD B 3
GND 2
DVD G 1
1.0mm FFC
CD8002 2F051601
CP8102_1mm PICH
IMSA-9615S-12A-PP-A
CVBS 12
GND 11
DVD RESET 10
A MUTE 9
AUDIO LEF 8
AUDIO C 7
AUDIO SL 6
AUDIO SR 5
GND 4
L AUDIO 3
GND 2
R AUDIO 1
MCL4148
D8102
1.0mm FFC
CD8001 2F0C0601

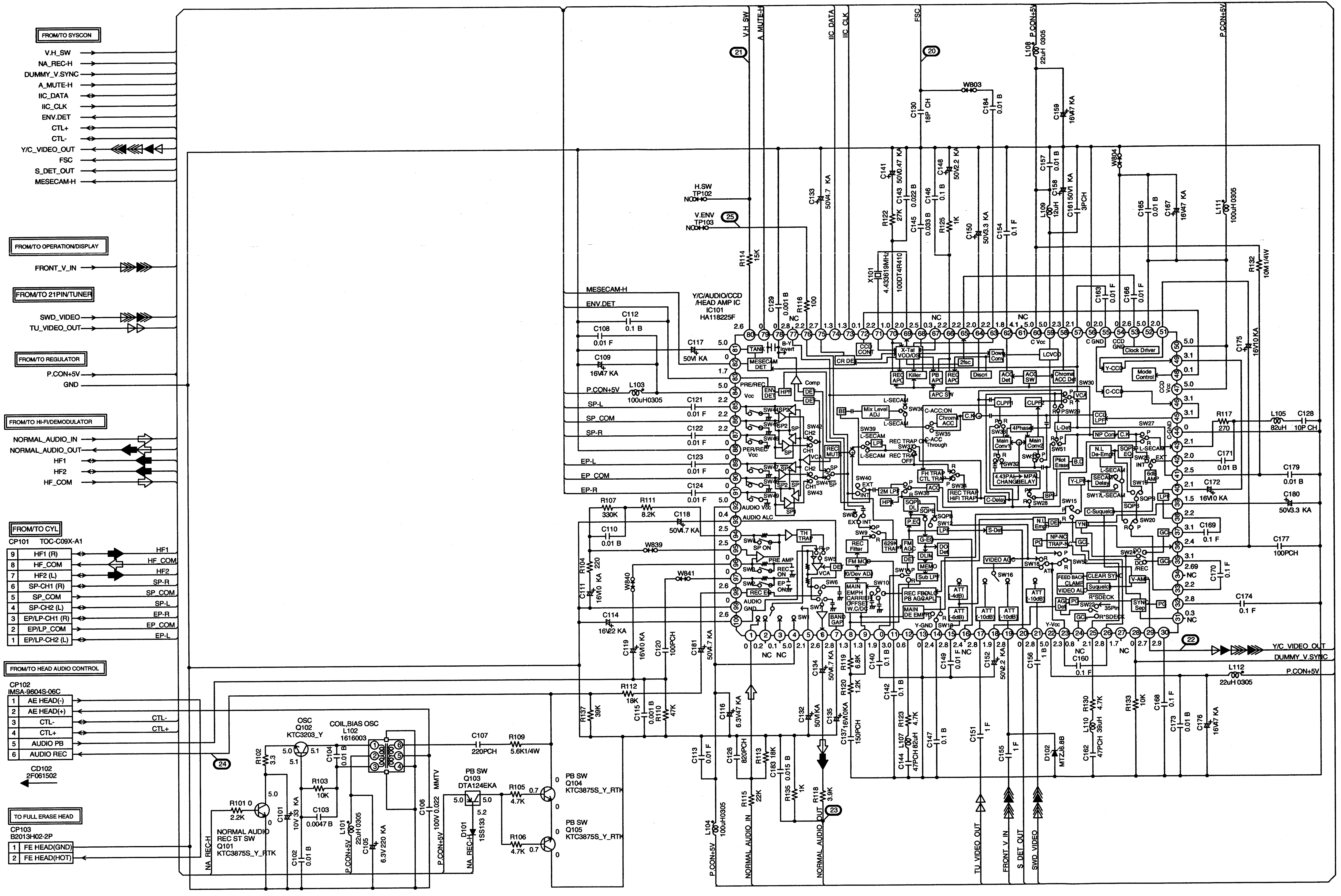
	1	2	3	4
A	Y	G	CVBS	Y
B	V	R	Y	V
C	U	B	C	U
D	C	CVBS	CVBS	CVBS

NOTE:THE DC VOLTAGE EACH PART WAS
MEASURED WITH THE DIGITAL TESTER
DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (Y/C/AUDIO AMP)

Show page 115 - 119 the waveform of ○ mark position.

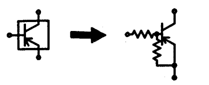

(VCR PCB)
FROM/TO SYSCON
V.H_SW
NA_REC-H
DUMMY_V.SYNC
A_MUTE-H
IIC_DATA
IIC_CLK
ENV.DET
CTL+
CTL-
Y/C_VIDEO_OUT
FSC
S_DET_OUT
MESECAM-H
FROM/TO OPERATION/DISPLAY
FRONT_V_IN
FROM/TO 21PIN/TUNER
SWD_VIDEO
TU_VIDEO_OUT
FROM/TO REGULATOR
P.CON+5V
GND
FROM/TO HI-FI/DEMODULATOR
NORMAL_AUDIO_IN
NORMAL_AUDIO_OUT
HF1
HF2
HF_COM
FROM/TO CYL
CP101 TOC-C09X-A1
9 HF1 (R)
8 HF_COM
7 HF2 (L)
6 SP-CH1 (R)
5 SP_COM
4 SP-CH2 (L)
3 EP/LP-CH1 (R)
2 EP/LP_COM
1 EP/LP-CH2 (L)
FROM/TO HEAD AUDIO CONTROL
CP102
IMSA-9604S-06C
1 AE HEAD(-)
2 AE HEAD(+)
3 CTL-
4 CTL+
5 AUDIO PB
6 AUDIO REC
CD102
2F061502
TO FULL ERASE HEAD
CP103
B2013H02-2P
1 FE HEAD(GND)
2 FE HEAD(HOT)
Y/C/AUDIO/CCD
/HEAD AMP IC
IC101
HA118225F
H.SW
TP102
V.ENV
TP103
X101
4.433619MHz
OSC
Q102
KTC3203_Y
COIL,BIAS OSC
L102
1616003
NORMAL AUDIO
REC ST SW
Q101
KTC3875S_Y_RTK
PB SW
Q103
DTA124EKA
PB SW
Q104
KTC3875S_Y_RTK
PB SW
Q105
KTC3875S_Y_RTK
D101
1SS133
D102
MTZJ5.6B
MESECAM-H
ENV.DET
SP-L
SP_COM
SP-R
EP-L
EP_COM
EP-R
P.CON+5V
Y/C_VIDEO_OUT
DUMMY_V.SYNC
P.CON+5V
TU_VIDEO_OUT
FRONT_V_IN
S_DET_OUT
SWD_VIDEO
NORMAL_AUDIO_IN
NORMAL_AUDIO_OUT
NA_REC-H
(20)
(21)
(22)
(23)
(24)
(25)

⋘ RECORD COLOR SIGNAL
⋘ RECORD LUMINANCE SIGNAL
◁ AUDIO SIGNAL(REC)
◀ AUDIO SIGNAL(PB)
◁ PLAYBACK COLOR SIGNAL
◀ PLAYBACK LUMINANCE SIGNAL
◁◁ TUNER VIDEO SIGNAL

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

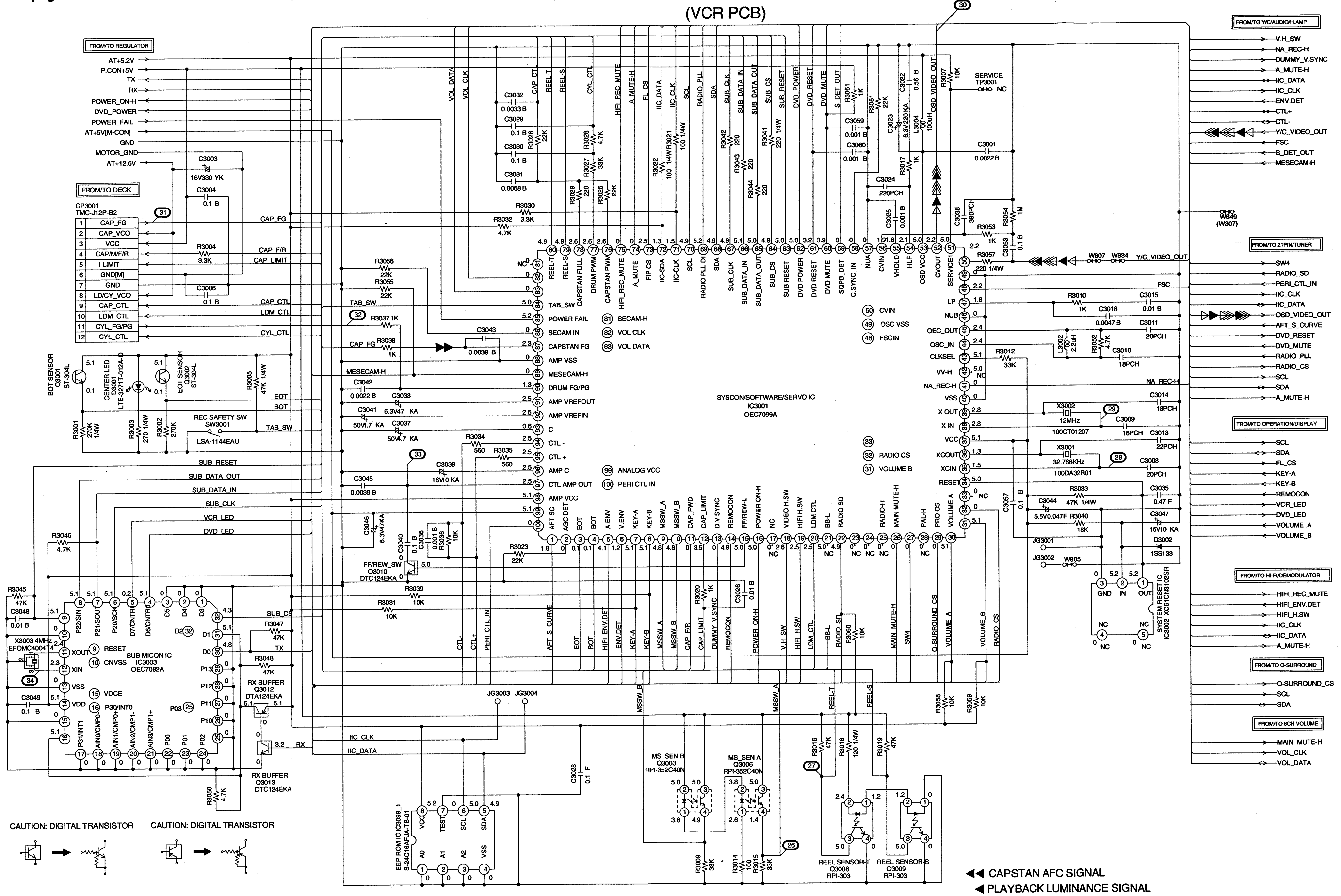
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

CAUTION: DIGITAL TRANSISTOR



SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (SYSCON)

Show page 115 - 119 the waveform of ○ mark position.


(VCR PCB)
FROM/TO REGULATOR
AT+5.2V
P.CON+5V
TX
RX
POWER_ON-H
DVD_POWER
POWER_FAIL
AT+5V[M-CON]
GND
MOTOR_GND
AT+12.6V
FROM/TO DECK
CP3001
TMC-J12P-B2
1 CAP_FG
2 CAP_VCO
3 VCC
4 CAP/M/F/R
5 I LIMIT
6 GND[M]
7 GND
8 LD/CY_VCO
9 CAP_CTL
10 LDM_CTL
11 CYL_FG/PG
12 CYL_CTL
BOT SENSOR Q3001 ST-304L
CENTER LED D3001 LTE-3271T-012A-0
EOT SENSOR Q3002 ST-304L
REC SAFETY SW SW3001 LSA-1144EAU
SUB_RESET
SUB_DATA_OUT
SUB_DATA_IN
SUB_CLK
VCR_LED
DVD_LED
SUB MICON IC IC3003 OEC7082A
X3003 4MHz EFOMC4004T4
RX BUFFER Q3012 DTA124EKA
RX BUFFER Q3013 DTC124EKA
FF/REW_SW Q3010 DTC124EKA
SYSCON/SOFTWARE/SERVO IC IC3001 OEC7099A
X3002 12MHz 100CT01207
X3001 32.768KHz 100DA32R01
SYSTEM RESET IC IC3002 XC61CN3102SR
EEP ROM IC IC3099_1 S-24C16AFJA-TB-01
MS_SEN B Q3003 RPI-352C40N
MS_SEN A Q3006 RPI-352C40N
REEL SENSOR-T Q3008 RPI-303
REEL SENSOR-S Q3009 RPI-303
SERVICE TP3001
FROM/TO Y/C/AUDIO/H.AMP
V.H_SW
NA_REC-H
DUMMY_V.SYNC
A_MUTE-H
IIC_DATA
IIC_CLK
ENV.DET
CTL+
CTL-
Y/C_VIDEO_OUT
FSC
S_DET_OUT
MESECAM-H
W849 (W307)
FROM/TO 21PIN/TUNER
SW4
RADIO_SD
PERI_CTL_IN
IIC_CLK
IIC_DATA
OSD_VIDEO_OUT
AFT_S_CURVE
DVD_RESET
DVD_MUTE
RADIO_PLL
RADIO_CS
SCL
SDA
A_MUTE-H
FROM/TO OPERATION/DISPLAY
SCL
SDA
FL_CS
KEY-A
KEY-B
REMOCON
VCR_LED
DVD_LED
VOLUME_A
VOLUME_B
FROM/TO HI-FI/DEMODULATOR
HIFI_REC_MUTE
HIFI_ENV.DET
HIFI_H.SW
IIC_CLK
IIC_DATA
A_MUTE-H
FROM/TO Q-SURROUND
Q-SURROUND_CS
SCL
SDA
FROM/TO 6CH VOLUME
MAIN_MUTE-H
VOL_CLK
VOL_DATA
CAUTION: DIGITAL TRANSISTOR
CAUTION: DIGITAL TRANSISTOR

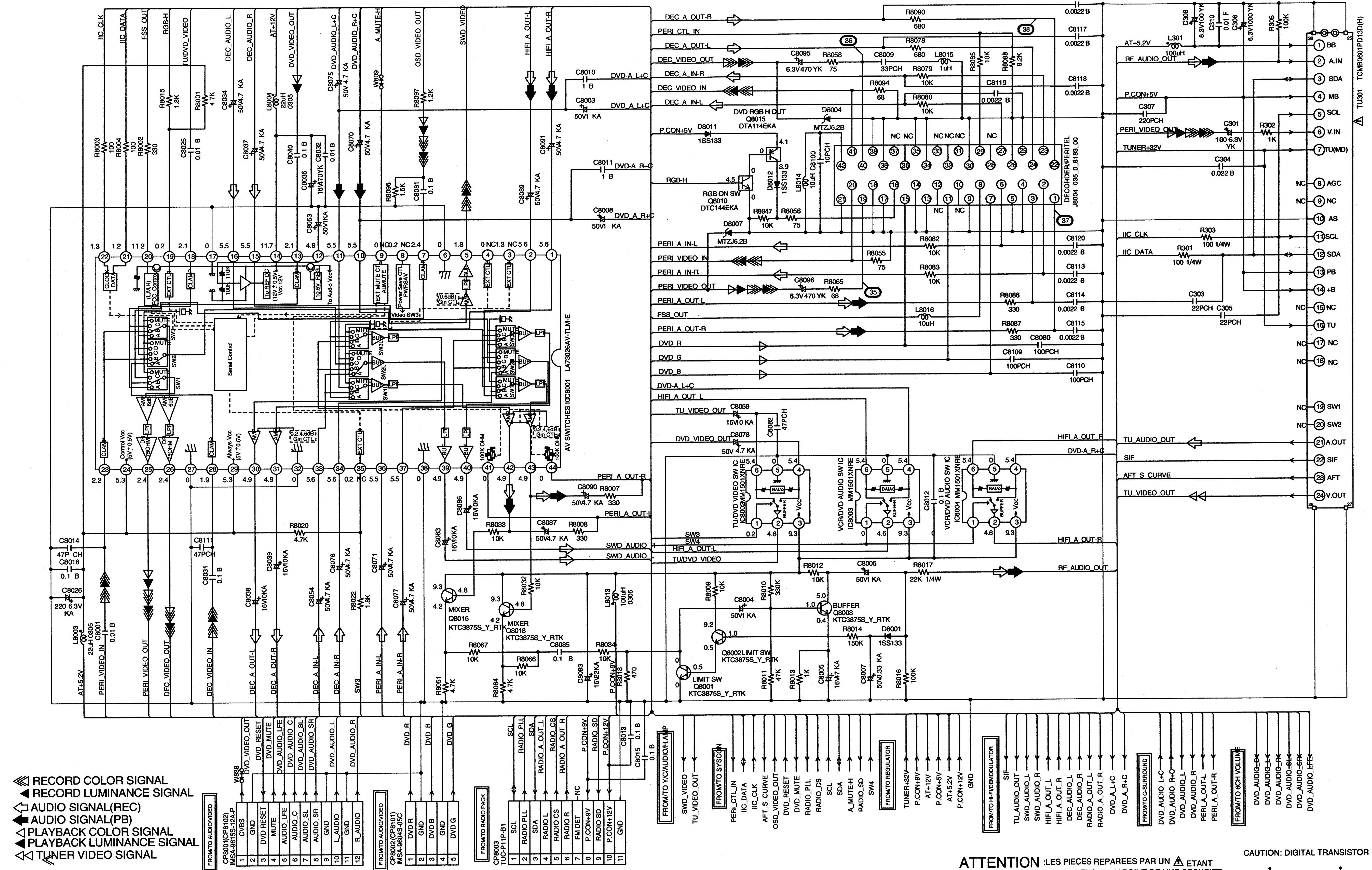
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

◀◀ CAPSTAN AFC SIGNAL
◀ PLAYBACK LUMINANCE SIGNAL
◁ PLAYBACK COLOR SIGNAL
⋘ RECORD COLOR SIGNAL
⋘ RECORD LUMINANCE SIGNAL

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (21PIN/TUNER)

Show page 115 - 119 the waveform of ○ mark position.



AV SWITCHES IC8001 LA73026AV-TLM-E
Serial Control
DECORDER/PERITEL J8004 035_0_8183_00
TU301 TCMB0601PD13D(H)
TU/DVD VIDEO SW IC IC8002 MM1501XNRE
VCR/DVD AUDIO SW IC IC8003 MM1501XNRE
VCR/DVD AUDIO SW IC IC8004 MM1501XNRE
DVD RGB H OUT Q8015 DTA114EKA
RGB ON SW Q8010 DTC144EKA
MIXER Q8016 KTC3875S_Y_RTK
MIXER Q8018 KTC3875S_Y_RTK
BUFFER Q8003 KTC3875S_Y_RTK
Q8002 LIMIT SW KTC3875S_Y_RTK
LIMIT SW Q8001 KTC3875S_Y_RTK
FROM/TO AUDIO/VIDEO
CP8001(CP8102) IMSA-9615S-12A-P
FFC CD8001 2F0C0601
FROM/TO AUDIO/VIDEO
CP8002(CP8101) IMSA-9604S-05C
FFC CD8002 2F051601
FROM/TO RADIO PACK
CP8003 TUC-P11P-B1
FROM/TO Y/C/AUDIO/H.AMP
FROM/TO SYSCON
FROM/TO REGULATOR
FROM/TO HI-FI/DEMODULATOR
FROM/TO 5-SURROUND
FROM/TO 6CH VOLUME

◀◀ RECORD COLOR SIGNAL
◀ RECORD LUMINANCE SIGNAL
⇦ AUDIO SIGNAL(REC)
⬅ AUDIO SIGNAL(PB)
◁ PLAYBACK COLOR SIGNAL
◁ PLAYBACK LUMINANCE SIGNAL
◁◁ TUNER VIDEO SIGNAL

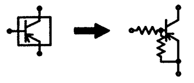
NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

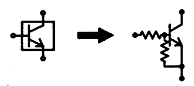
ATTENTION :LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE NÍUTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION :SINCE THESE PARTS MARKED BY ⚠ ARE DESCRIBED IN PARTS LIST ONLY CRITICAL FOR SAFETY,USE ONES.

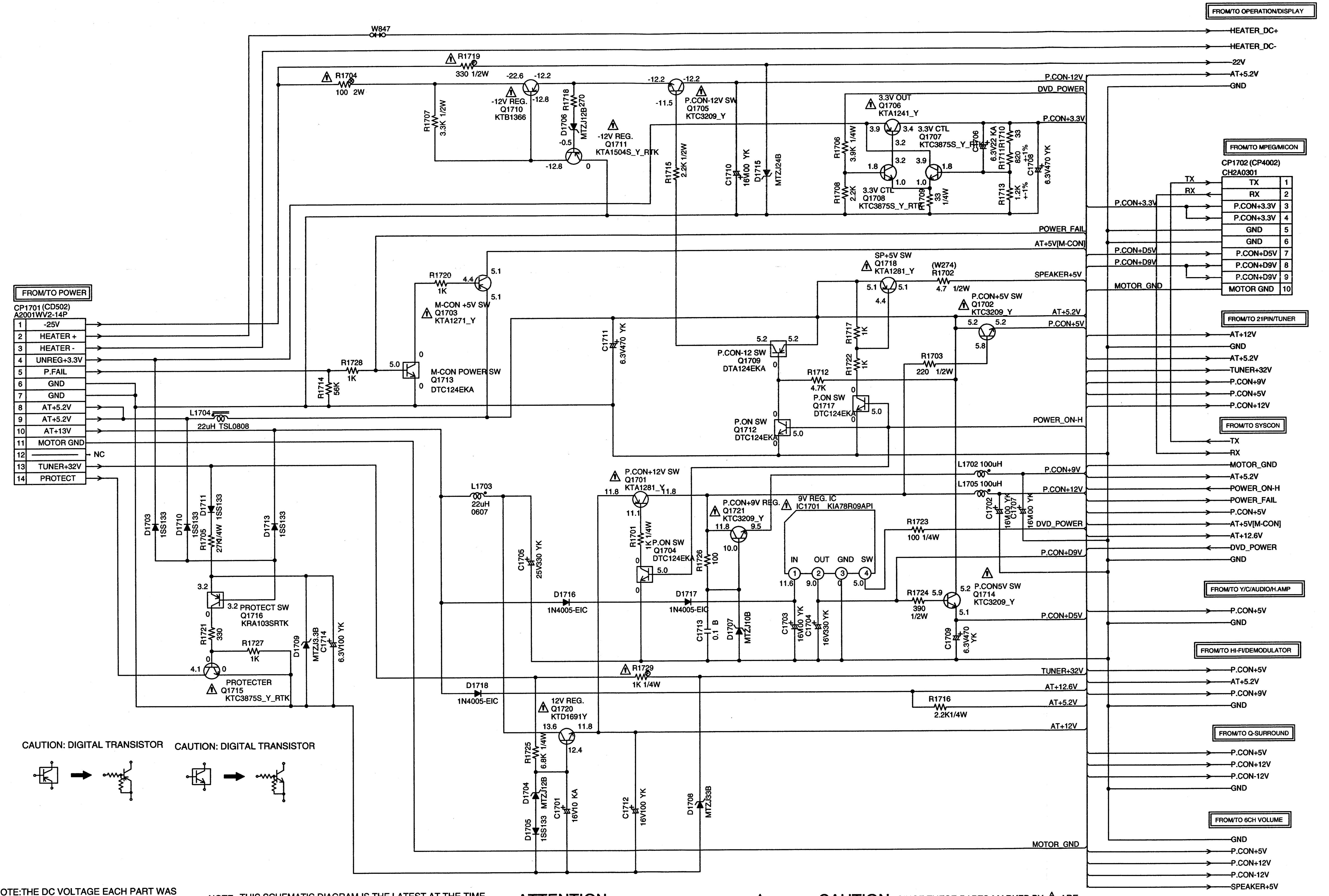
CAUTION: DIGITAL TRANSISTOR



CAUTION: DIGITAL TRANSISTOR



SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (REGULATOR)



FROM/TO POWER
CP1701 (CD502)
A2001WV2-14P
1 -25V
2 HEATER +
3 HEATER -
4 UNREG+3.3V
5 P.FAIL
6 GND
7 GND
8 AT+5.2V
9 AT+5.2V
10 AT+13V
11 MOTOR GND
12 NC
13 TUNER+32V
14 PROTECT
W847
R1719 330 1/2W
R1704 100 2W
R1707 3.3K 1/2W
-12V REG. Q1710 KTB1366
D1706 MTZJ12B
R1718 270
-12V REG. Q1711 KTA1504S_Y_RTK
P.CON-12V SW Q1705 KTC3209_Y
R1715 2.2K 1/2W
C1710 16V100 YK
D1715 MTZJ24B
3.3V OUT Q1706 KTA1241_Y
R1706 3.9K 1/4W
3.3V CTL Q1707 KTC3875S_Y_RTK
C1706 6.3V22 KA
R1711 820 +1%
R1710 33
C1708 6.3V470 YK
R1708 2.2K
3.3V CTL Q1708 KTC3875S_Y_RTK
R1709 33 1/4W
R1713 1.2K +1%
P.CON-12V
DVD_POWER
P.CON+3.3V
POWER_FAIL
AT+5V[M-CON]
SPEAKER+5V
AT+5.2V
P.CON+5V
POWER_ON-H
R1720 1K
M-CON +5V SW Q1703 KTA1271_Y
R1728 1K
R1714 56K
M-CON POWER SW Q1713 DTC124EKA
C1711 6.3V470 YK
SP+5V SW Q1718 KTA1281_Y
(W274) R1702 4.7 1/2W
P.CON+5V SW Q1702 KTC3209_Y
P.CON-12 SW Q1709 DTA124EKA
R1717 1K
R1722 1K
R1712 4.7K
P.ON SW Q1717 DTC124EKA
P.ON SW Q1712 DTC124EKA
R1703 220 1/2W
L1704 22uH TSL0808
D1703 1SS133
D1710 1SS133
D1711 1SS133
R1705 27K 1/4W
D1713 1SS133
PROTECT SW Q1716 KRA103SRTK
R1721 330
R1727 1K
D1709 MTZJ3.3B
C1714 6.3V100 YK
PROTECTER Q1715 KTC3875S_Y_RTK
L1703 22uH 0607
C1705 25V330 YK
D1716 1N4005-EIC
D1717 1N4005-EIC
D1718 1N4005-EIC
P.CON+12V SW Q1701 KTA1281_Y
R1701 1K 1/4W
P.ON SW Q1704 DTC124EKA
R1726 100
P.CON+9V REG. Q1721 KTC3209_Y
9V REG. IC IC1701 KIA78R09API
IN OUT GND SW
C1713 0.1 B
D1707 MTZJ10B
C1703 16V100 YK
C1704 16V330 YK
L1702 100uH
L1705 100uH
C1702 16V100 YK
C1707 16V100 YK
P.CON+9V
P.CON+12V
P.CON+D9V
P.CON+D5V
R1723 100 1/4W
R1724 390 1/2W
P.CON5V SW Q1714 KTC3209_Y
C1709 6.3V470 YK
R1729 1K 1/4W
TUNER+32V
AT+12.6V
AT+12V
R1716 2.2K1/4W
12V REG. Q1720 KTD1691Y
R1725 6.8K 1/4W
D1704 MTZJ12B
D1705 1SS133
C1701 16V10 KA
C1712 16V100 YK
D1708 MTZJ33B
MOTOR_GND
CAUTION: DIGITAL TRANSISTOR
CAUTION: DIGITAL TRANSISTOR
FROM/TO OPERATION/DISPLAY
HEATER_DC+
HEATER_DC-
22V
AT+5.2V
GND
FROM/TO MPEG/MICON
CP1702 (CP4002)
CH2A0301
1 TX
2 RX
3 P.CON+3.3V
4 P.CON+3.3V
5 GND
6 GND
7 P.CON+D5V
8 P.CON+D9V
9 P.CON+D9V
10 MOTOR GND
FROM/TO 21PIN/TUNER
AT+12V
GND
AT+5.2V
TUNER+32V
P.CON+9V
P.CON+5V
P.CON+12V
FROM/TO SYSCON
TX
RX
MOTOR_GND
AT+5.2V
POWER_ON-H
POWER_FAIL
P.CON+5V
AT+5V[M-CON]
AT+12.6V
DVD_POWER
GND
FROM/TO Y/C/AUDIO/H.AMP
P.CON+5V
GND
FROM/TO HI-FI/DEMODULATOR
P.CON+5V
AT+5.2V
P.CON+9V
GND
FROM/TO Q-SURROUND
P.CON+5V
P.CON+12V
P.CON-12V
GND
FROM/TO 6CH VOLUME
GND
P.CON+5V
P.CON+12V
P.CON-12V
SPEAKER+5V

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

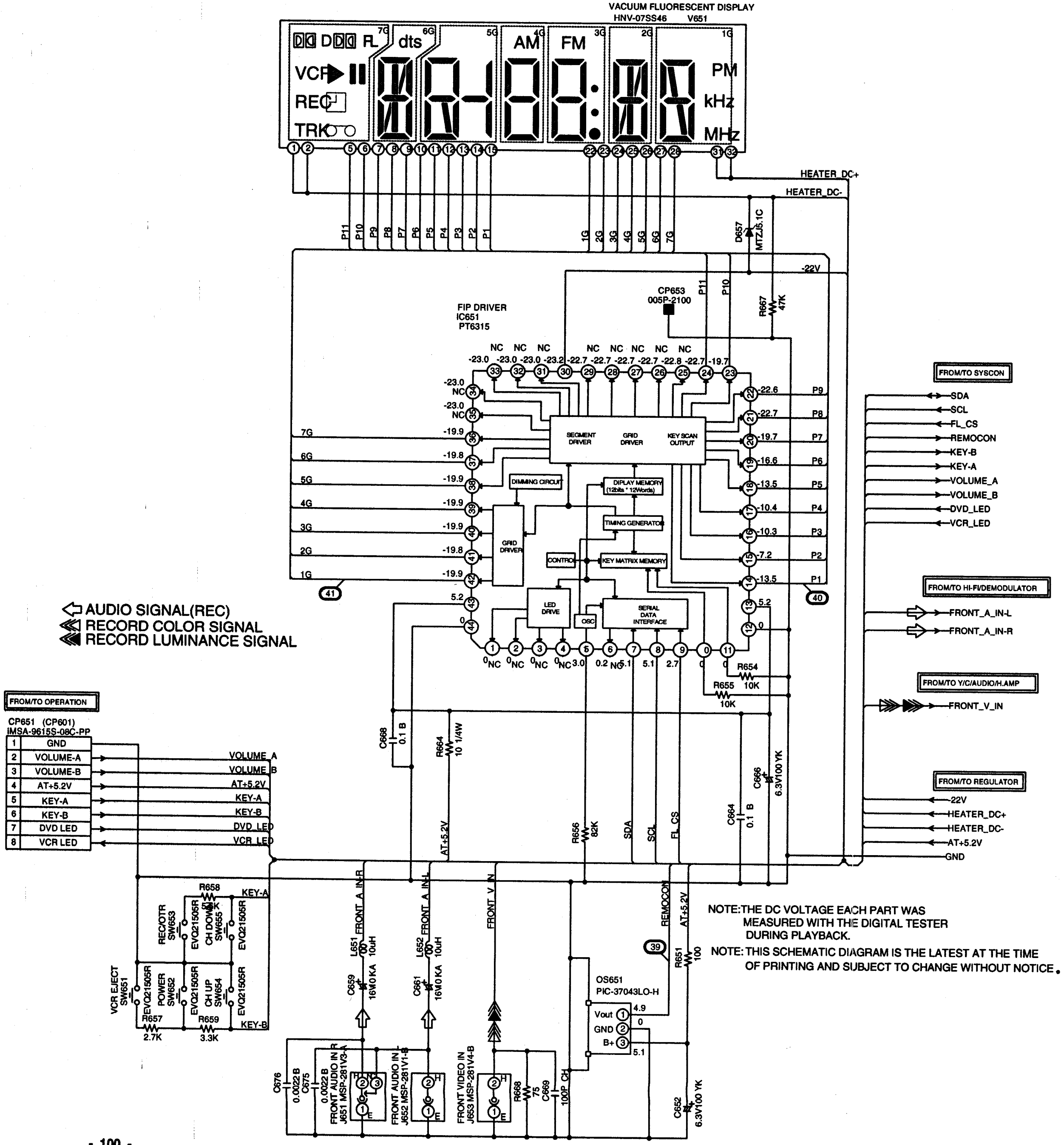
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

ATTENTION :LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE NIUTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION :SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY.

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (OPERATION/DISPLAY)

Show page 115 - 119 the waveform of ○ mark position.



VACUUM FLUORESCENT DISPLAY
HNV-07SS46 V651
dts
AM
FM
VCR
REC
TRK
PM
kHz
MHz
HEATER_DC+
HEATER_DC-
D657 MTZJ5.1C
-22V
R667 47K
CP653 005P-2100
FIP DRIVER
IC651
PT6315
SEGMENT DRIVER
GRID DRIVER
KEY SCAN OUTPUT
DIMMING CIRCUIT
DIPLAY MEMORY (12bits * 12Words)
TIMING GENERATOR
CONTROL
KEY MATRIX MEMORY
LED DRIVE
OSC
SERIAL DATA INTERFACE
R654 10K
R655 10K
FROM/TO SYSCON
SDA
SCL
FL_CS
REMOCON
KEY-B
KEY-A
VOLUME_A
VOLUME_B
DVD_LED
VCR_LED
FROM/TO HI-FI/DEMODULATOR
FRONT_A_IN-L
FRONT_A_IN-R
FROM/TO Y/C/AUDIO/H.AMP
FRONT_V_IN
FROM/TO REGULATOR
-22V
HEATER_DC+
HEATER_DC-
AT+5.2V
GND
AUDIO SIGNAL(REC)
RECORD COLOR SIGNAL
RECORD LUMINANCE SIGNAL
FROM/TO OPERATION
CP651 (CP601)
IMSA-9615S-08C-PP
1 GND
2 VOLUME-A
3 VOLUME-B
4 AT+5.2V
5 KEY-A
6 KEY-B
7 DVD LED
8 VCR LED
C668 0.1 B
R664 10 1/4W
C666 6.3V100 YK
C664 0.1 B
R656 82K
R658 5.6K
REC/OTR SW653
CH DOWN SW655
VCR EJECT SW651
POWER SW652
CH UP SW654
EVQ21505R
R657 2.7K
R659 3.3K
L651 10uH
L652 10uH
C659 16V10KA
C661 16V10KA
C676 0.0022 B
C675 0.0022 B
FRONT AUDIO IN R J651 MSP-281V3-A
FRONT AUDIO IN-L J652 MSP-281V1-B
FRONT VIDEO IN J653 MSP-281V4-B
R668 75
C669 100P CH
OS651
PIC-37043LO-H
Vout
GND
B+
R651 100
C652 6.3V100 YK

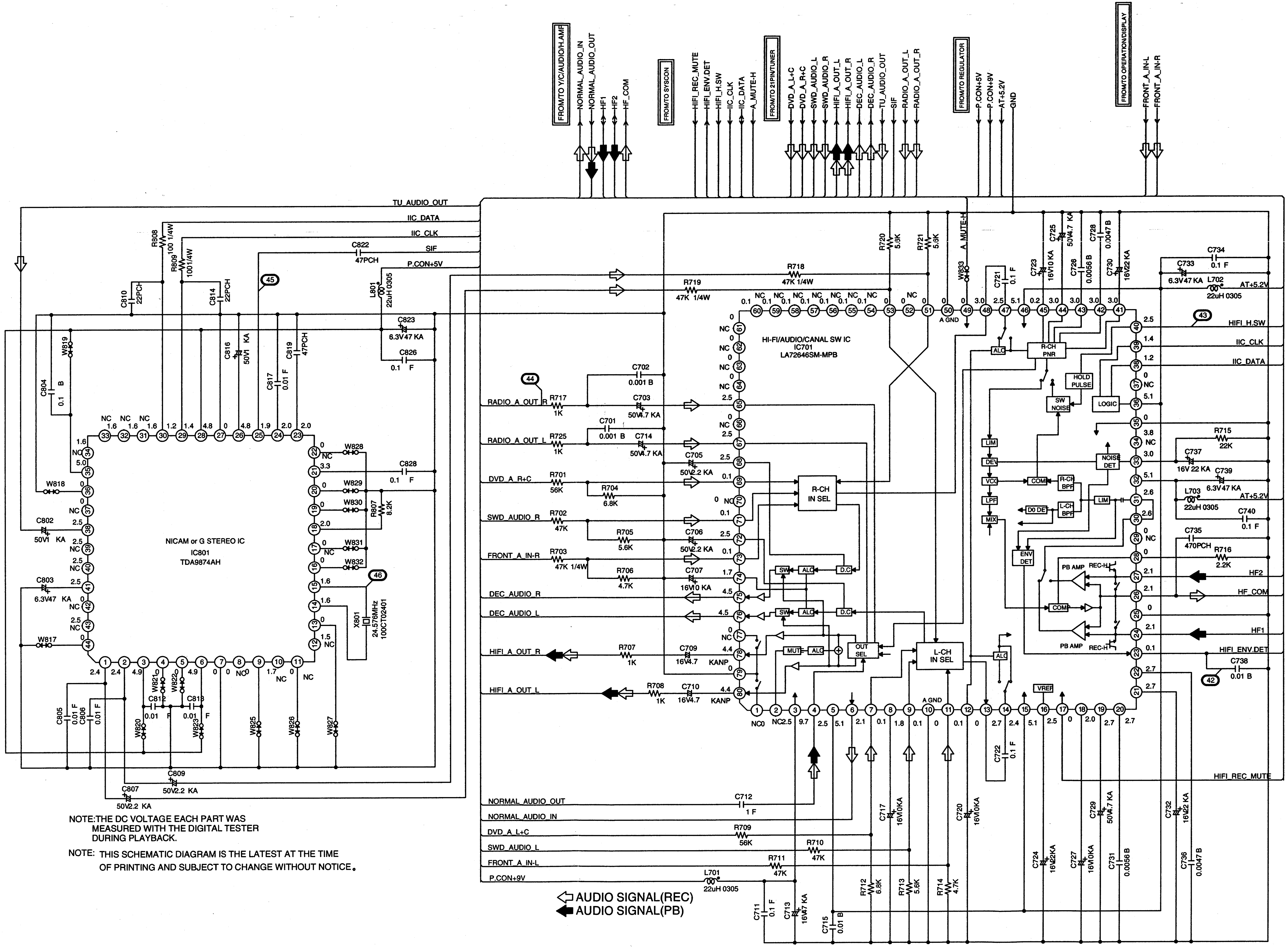
NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (Hi-Fi/DEMODURATOR)

Show page 115 - 119 the waveform of ○ mark position.

PIN	G STEREO TDA9873H	NICAM TDA9874AH
1	OUTL	OUTL
2	OUTR	OUTR
3	CDE1	VDDA1
4	NC	VSSA1
5	NC	VSSD1
6	CDE2	VDDD1
7	AGND	VSSD2
8	AF1I	NC
9	NC	TP2
10	AF1O	NICAM
11	NC	TP1
12	NC	PCLK
13	AFR	ADDR1
14	LF1	XTALO
15	XTAL	XTALI
16	NC	TP3
17	NC	TEST2
18	LF2	IREF
19	NC	ADDR2
20	NC	VSSA2
21	MAD	VDEC
22	NC	TEST1
23	NC	SIF2
24	CAF1	VREF1
25	IFINT	SIF1
26	CAF2	CRESET
27	DGND	VSSA3
28	VCC	VDDA3
29	SCL	SCL
30	SDA	SDA
31	LPF	SDO
32	AF20	WS
33	AF21	SCK
34	CTRIG	SYSCLK
35	CID	VDDD3
36	NC	VSSD3
37	P1	P1
38	EXTM	MONOIN
39	EXTR	EXTIR
40	EXTL	EXTIL
41	VREF	VREF2
42	P2	P2
43	OUTM	OUTM
44	NC	VSSA4

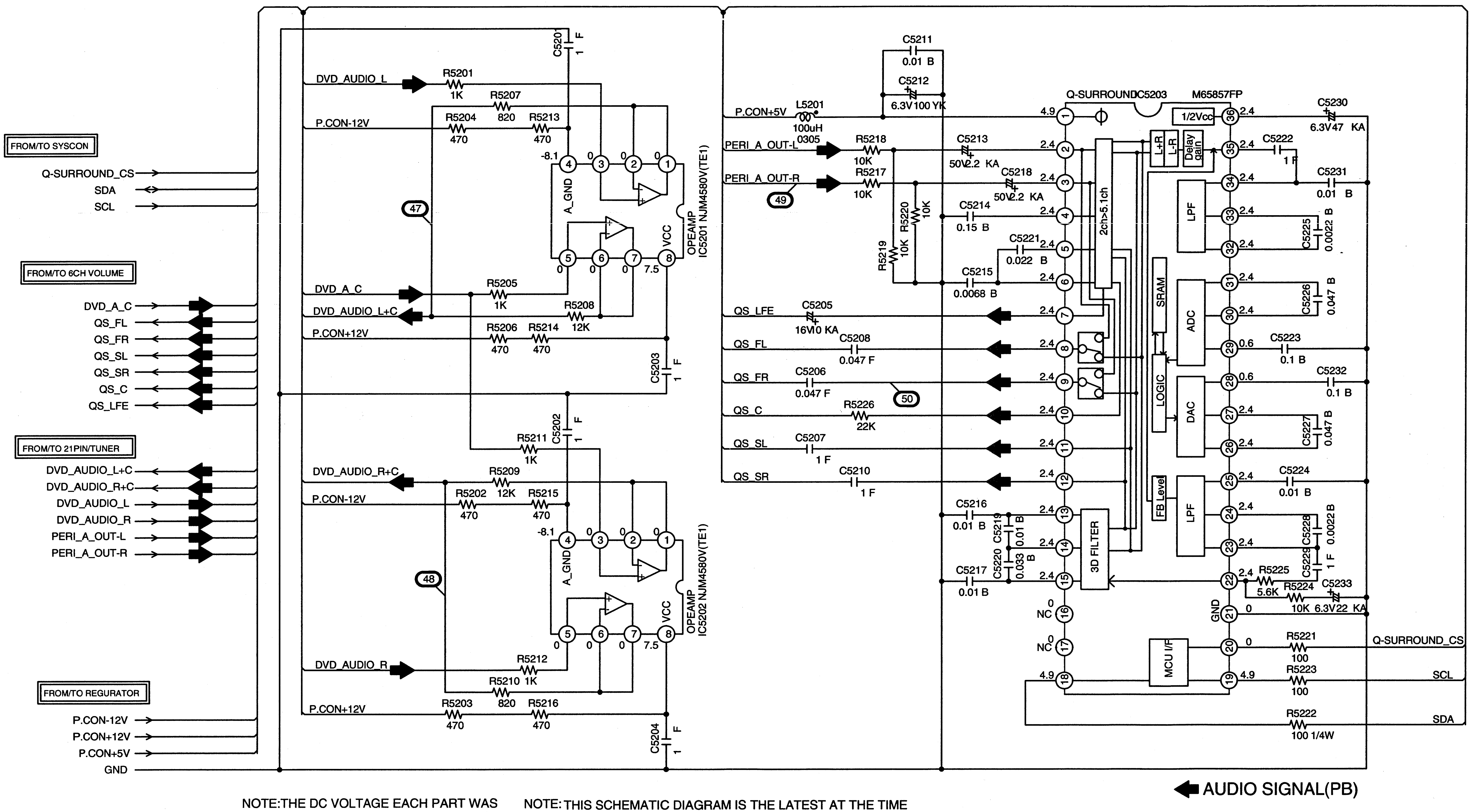

FROM/TO Y/C/AUDIO/H.AMP
NORMAL_AUDIO_IN
NORMAL_AUDIO_OUT
HF1
HF2
HF_COM
FROM/TO SYSCON
HIFI_REC_MUTE
HIFI_ENV.DET
HIFI_H.SW
IIC_CLK
IIC_DATA
A_MUTE-H
FROM/TO 21PIN/TUNER
DVD_A_L+C
DVD_A_R+C
SWD_AUDIO_L
SWD_AUDIO_R
HIFI_A_OUT_L
HIFI_A_OUT_R
DEC_AUDIO_L
DEC_AUDIO_R
TU_AUDIO_OUT
SIF
RADIO_A_OUT_L
RADIO_A_OUT_R
FROM/TO REGULATOR
P.CON+5V
P.CON+9V
AT+5.2V
GND
FROM/TO OPERATION/DISPLAY
FRONT_A_IN-L
FRONT_A_IN-R
NICAM or G STEREO IC
IC801
TDA9874AH
HI-FI/AUDIO/CANAL SW IC
IC701
LA72646SM-MPB
R-CH IN SEL
L-CH IN SEL
OUT SEL
R-CH PNR
HOLD PULSE
SW NOISE
LOGIC
NOISE DET
ENV DET
PB AMP
REC-H
VREF
X801
24.576MHz
100CT02401
A GND
AUDIO SIGNAL(REC)
AUDIO SIGNAL(PB)

NOTE:THE DC VOLTAGE EACH PART WAS
MEASURED WITH THE DIGITAL TESTER
DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (Q-SURROUND)

Show page 115 - 119 the waveform of ○ mark position.



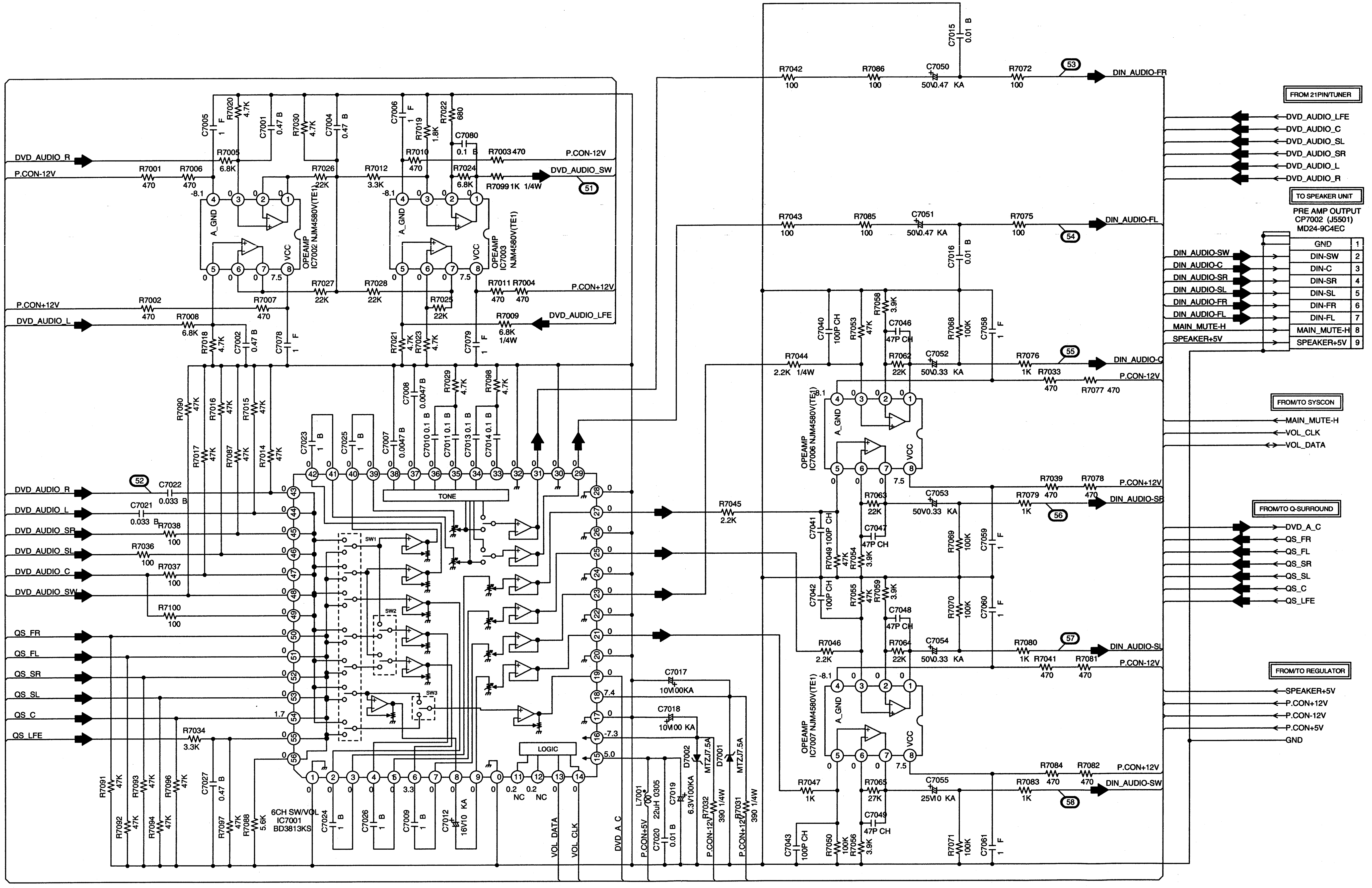
FROM/TO SYSCON
Q-SURROUND_CS
SDA
SCL
FROM/TO 6CH VOLUME
DVD_A_C
QS_FL
QS_FR
QS_SL
QS_SR
QS_C
QS_LFE
FROM/TO 21PIN/TUNER
DVD_AUDIO_L+C
DVD_AUDIO_R+C
DVD_AUDIO_L
DVD_AUDIO_R
PERI_A_OUT-L
PERI_A_OUT-R
FROM/TO REGURATOR
P.CON-12V
P.CON+12V
P.CON+5V
GND
C5201 1 F
R5201 1K
R5207 820
R5204 470
R5213 470
47
48
49
50
A_GND
VCC
OPEAMP IC5201 NJM4580V(TE1)
OPEAMP IC5202 NJM4580V(TE1)
R5205 1K
R5208 12K
R5206 470
R5214 470
C5203 1 F
C5202 1 F
R5211 1K
R5209 12K
R5202 470
R5215 470
R5212
R5210 1K
R5203 470
R5216 470
C5204 1 F
-8.1
7.5
L5201 100uH 0305
R5218 10K
R5217 10K
R5219 10K
R5220 10K
C5211 0.01 B
C5212 6.3V100 YK
C5213 50V2.2 KA
C5218 50V2.2 KA
C5214 0.15 B
C5221 0.022 B
C5215 0.0068 B
C5205 16V10 KA
C5208 0.047 F
C5206 0.047 F
R5226 22K
C5207 1 F
C5210 1 F
C5216 0.01 B
C5219 0.01 B
C5220 0.033 B
C5217 0.01 B
Q-SURROUND IC5203 M65857FP
1/2Vcc
L+R
L-R
Delay gain
2ch>5.1ch
SRAM
LOGIC
LPF
ADC
DAC
FB Level
3D FILTER
MCU I/F
NC
GND
C5230 6.3V47 KA
C5222 1 F
C5231 0.01 B
C5225 0.0022 B
C5226 0.047 B
C5223 0.1 B
C5232 0.1 B
C5227 0.047 B
C5224 0.01 B
C5228 0.0022 B
C5229 1 F
R5225 5.6K
R5224 10K
C5233 6.3V22 KA
R5221 100
R5223 100
R5222 100 1/4W
4.9
2.4
0.6
0
AUDIO SIGNAL(PB)

NOTE:THE DC VOLTAGE EACH PART WAS
MEASURED WITH THE DIGITAL TESTER
DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (6CH VLOUME)

Show page 115 - 119 the waveform of ○ mark position.


DVD_AUDIO_R
P.CON-12V
P.CON+12V
DVD_AUDIO_L
R7001 470
R7006 470
R7002 470
R7008 6.8K
R7005 6.8K
R7020 4.7K
R7030 4.7K
C7005 1 F
C7001 0.47 B
C7004 0.47 B
C7006 1 F
R7019 1.8K
R7022 680
C7080 0.1 B
R7003 470
R7010 470
R7024 6.8K
R7099 1K 1/4W
R7026 22K
R7012 3.3K
R7027 22K
R7028 22K
R7007 470
R7025 22K
R7011 470
R7004 470
R7009 6.8K 1/4W
DVD_AUDIO_SW
DVD_AUDIO_LFE
(51)
OPEAMP IC7002 NJM4580V(TE1)
OPEAMP IC7003 NJM4580V(TE1)
A_GND
VCC
R7018 4.7K
C7002 0.47 B
C7078 1 F
R7021 4.7K
R7023 4.7K
C7079 1 F
R7090 47K
R7016 47K
R7015 47K
R7017 47K
R7087 47K
R7014 47K
C7023 1 B
C7025 1 B
C7007 0.0047 B
C7008 0.0047 B
C7010 0.1 B
C7011 0.1 B
C7013 0.1 B
C7014 0.1 B
R7029 4.7K
R7098 4.7K
TONE
(52)
C7022 0.033 B
C7021 0.033 B
R7038 100
R7036 100
R7037 100
R7100 100
DVD_AUDIO_R
DVD_AUDIO_L
DVD_AUDIO_SR
DVD_AUDIO_SL
DVD_AUDIO_C
DVD_AUDIO_SW
QS_FR
QS_FL
QS_SR
QS_SL
QS_C
QS_LFE
R7034 3.3K
SW1
SW2
SW3
LOGIC
6CH SW/VOL IC7001 BD3813KS
R7091 47K
R7093 47K
R7096 47K
R7092 47K
R7094 47K
R7097 47K
R7088 5.6K
C7027 0.47 B
C7024 1 B
C7026 1 B
C7009 1 B
C7012 16V10 KA
VOL_DATA
VOL_CLK
DVD_A_C
C7017 10V100KA
C7018 10V100 KA
L7001 22uH 0305
P.CON+5V
C7020 0.01 B
C7019 6.3V100KA
D7002 MTZJ7.5A
D7001 MTZJ7.5A
R7032 390 1/4W
R7031 390 1/4W
P.CON-12V
P.CON+12V
R7045 2.2K
C7015 0.01 B
R7042 100
R7086 100
C7050 50V0.47 KA
R7072 100
(53)
DIN_AUDIO-FR
R7043 100
R7085 100
C7051 50V0.47 KA
R7075 100
(54)
DIN_AUDIO-FL
C7016 0.01 B
C7040 100P CH
R7053 47K
R7058 3.9K
C7046 47P CH
R7068 100K
C7058 1 F
R7044 2.2K 1/4W
R7062 22K
C7052 50V0.33 KA
R7076 1K
(55)
DIN_AUDIO-C
R7033 470
R7077 470
OPEAMP IC7006 NJM4580V(TE1)
R7039 470
R7078 470
R7063 22K
C7053 50V0.33 KA
R7079 1K
(56)
DIN_AUDIO-SR
C7041 100P CH
R7049 100P CH
R7054 3.9K
C7047 47P CH
R7069 100K
C7059 1 F
C7042 100P CH
R7055 47K
R7059 3.9K
C7048 47P CH
R7070 100K
C7060 1 F
R7046 2.2K
R7064 22K
C7054 50V0.33 KA
R7080 1K
(57)
DIN_AUDIO-SL
R7041 470
R7081 470
OPEAMP IC7007 NJM4580V(TE1)
R7084 470
R7082 470
R7047 1K
R7065 27K
C7055 25V10 KA
R7083 1K
(58)
DIN_AUDIO-SW
C7043 100P CH
R7050 100K
R7056 3.9K
C7049 47P CH
R7071 100K
C7061 1 F
FROM 21PIN/TUNER
DVD_AUDIO_LFE
DVD_AUDIO_C
DVD_AUDIO_SL
DVD_AUDIO_SR
DVD_AUDIO_L
DVD_AUDIO_R
TO SPEAKER UNIT
PRE AMP OUTPUT CP7002 (J5501) MD24-9C4EC
GND 1
DIN-SW 2
DIN-C 3
DIN-SR 4
DIN-SL 5
DIN-FR 6
DIN-FL 7
MAIN_MUTE-H 8
SPEAKER+5V 9
DIN_AUDIO-SW
DIN_AUDIO-C
DIN_AUDIO-SR
DIN_AUDIO-SL
DIN_AUDIO-FR
DIN_AUDIO-FL
MAIN_MUTE-H
SPEAKER+5V
FROM/TO SYSCON
MAIN_MUTE-H
VOL_CLK
VOL_DATA
FROM/TO Q-SURROUND
DVD_A_C
QS_FR
QS_FL
QS_SR
QS_SL
QS_C
QS_LFE
FROM/TO REGULATOR
SPEAKER+5V
P.CON+12V
P.CON-12V
P.CON+5V
GND

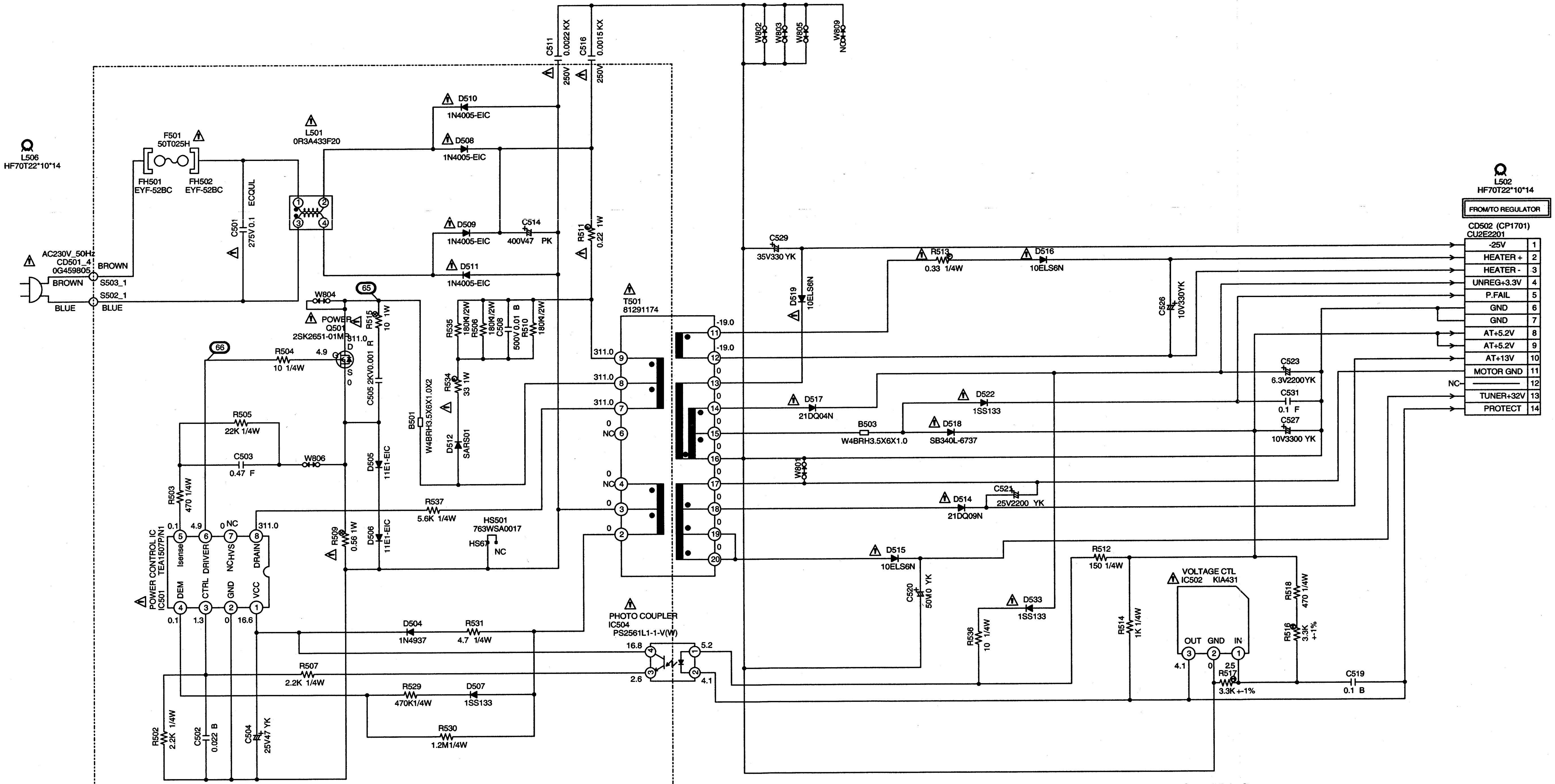
◀ AUDIO SIGNAL(PB)

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (POWER)

Show page 115 - 119 the waveform of ○ mark position.


L506
HF70T22*10*14
F501
50T025H
FH501
EYF-52BC
FH502
EYF-52BC
C501
275V 0.1 ECQUL
L501
0R3A433F20
AC230V_50Hz
CD501_4
0G4598053
BROWN
BLUE
S503_1
S502_1
D510
1N4005-EIC
D508
1N4005-EIC
D509
1N4005-EIC
D511
1N4005-EIC
C514
400V47 PK
C511
0.0022 KX
250V
C516
0.0015 KX
250V
R511
0.22 1W
W804
65
66
POWER
Q501
2SK2651-01MR
R504
10 1/4W
R515
10 1W
C505 2KV0.001 R
R535
180K/2W
R506
180K/2W
C508
500V 0.01 B
R510
180K/2W
R534
33 1W
B501
W4BRH3.5X6X1.0X2
D512
SARS01
R505
22K 1/4W
C503
0.47 F
W806
D505
11E1-EIC
R503
470 1/4W
POWER CONTROL IC
IC501 TEA1507P/N1
Isense
CTRL DRIVER
NCHVS
DRAIN
DEM
GND
VCC
R537
5.6K 1/4W
R509
0.56 1W
D506
11E1-EIC
HS501
763WSA0017
HS67
NC
T501
81291174
D504
1N4937
R531
4.7 1/4W
R507
2.2K 1/4W
R529
470K1/4W
D507
1SS133
R530
1.2M1/4W
R502
2.2K 1/4W
C502
0.022 B
C504
25V47 YK
PHOTO COUPLER
IC504
PS2561L1-1-V(W)
W802
W803
W805
W809
C529
35V330 YK
D519
10ELS6N
R513
0.33 1/4W
D516
10ELS6N
C526
10V330YK
D517
21DQ04N
B503
W4BRH3.5X6X1.0
D522
1SS133
D518
SB340L-6737
W801
D514
21DQ09N
C521
25V2200 YK
D515
10ELS6N
C520
50V10 YK
D533
1SS133
R536
10 1/4W
R512
150 1/4W
R514
1K 1/4W
VOLTAGE CTL
IC502 KIA431
OUT GND IN
R517
3.3K +-1%
R518
470 1/4W
R516
3.3K +-1%
C519
0.1 B
C523
6.3V2200YK
C531
0.1 F
C527
10V3300 YK
L502
HF70T22*10*14
FROM/TO REGULATOR
CD502 (CP1701)
CU2E2201
-25V 1
HEATER + 2
HEATER - 3
UNREG+3.3V 4
P.FAIL 5
GND 6
GND 7
AT+5.2V 8
AT+5.2V 9
AT+13V 10
MOTOR GND 11
NC 12
TUNER+32V 13
PROTECT 14
-19.0
311.0
16.8
5.2
2.6
4.1
2.5

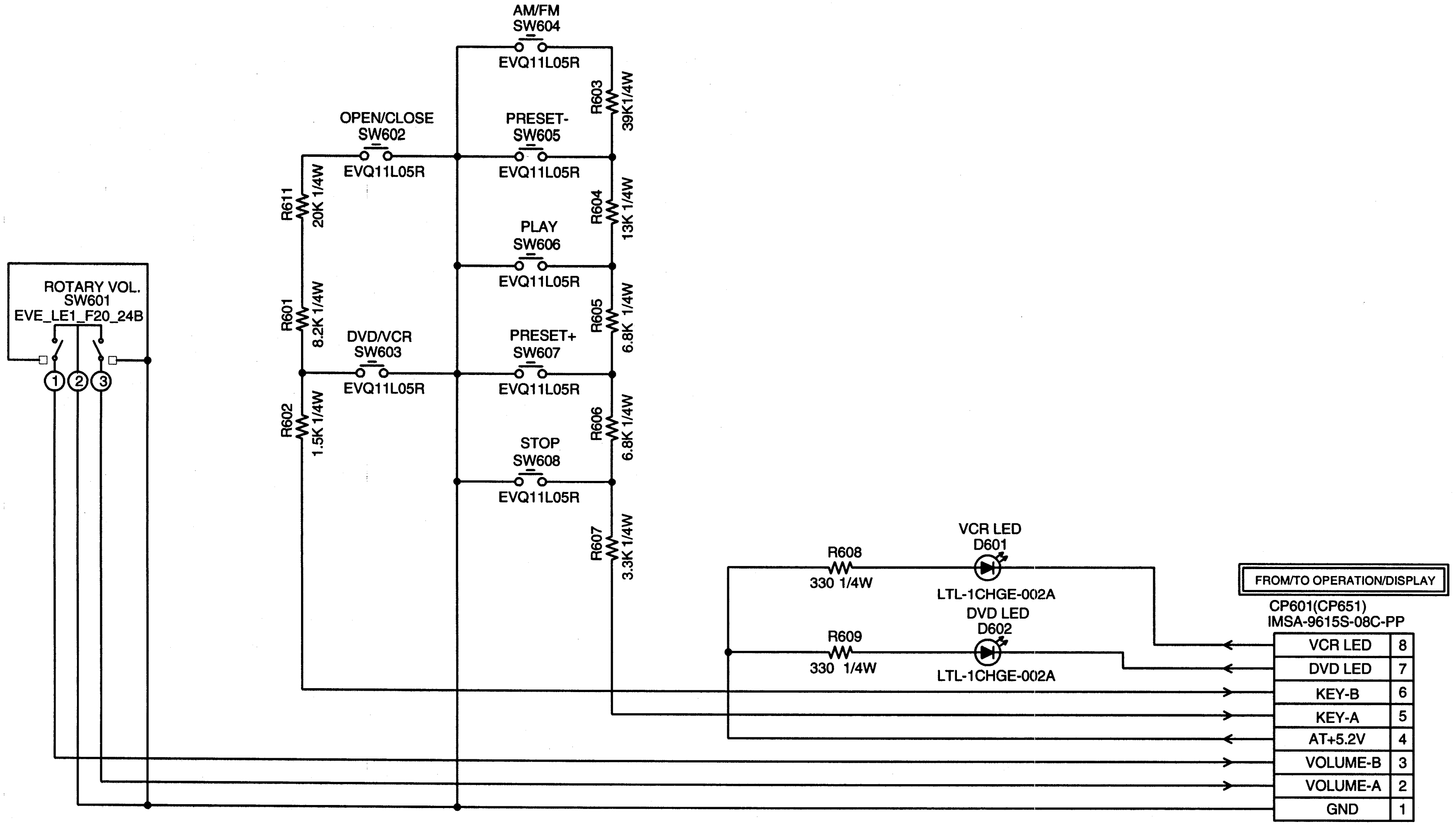
NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

CAUTION :SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION :LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (OPERATION)

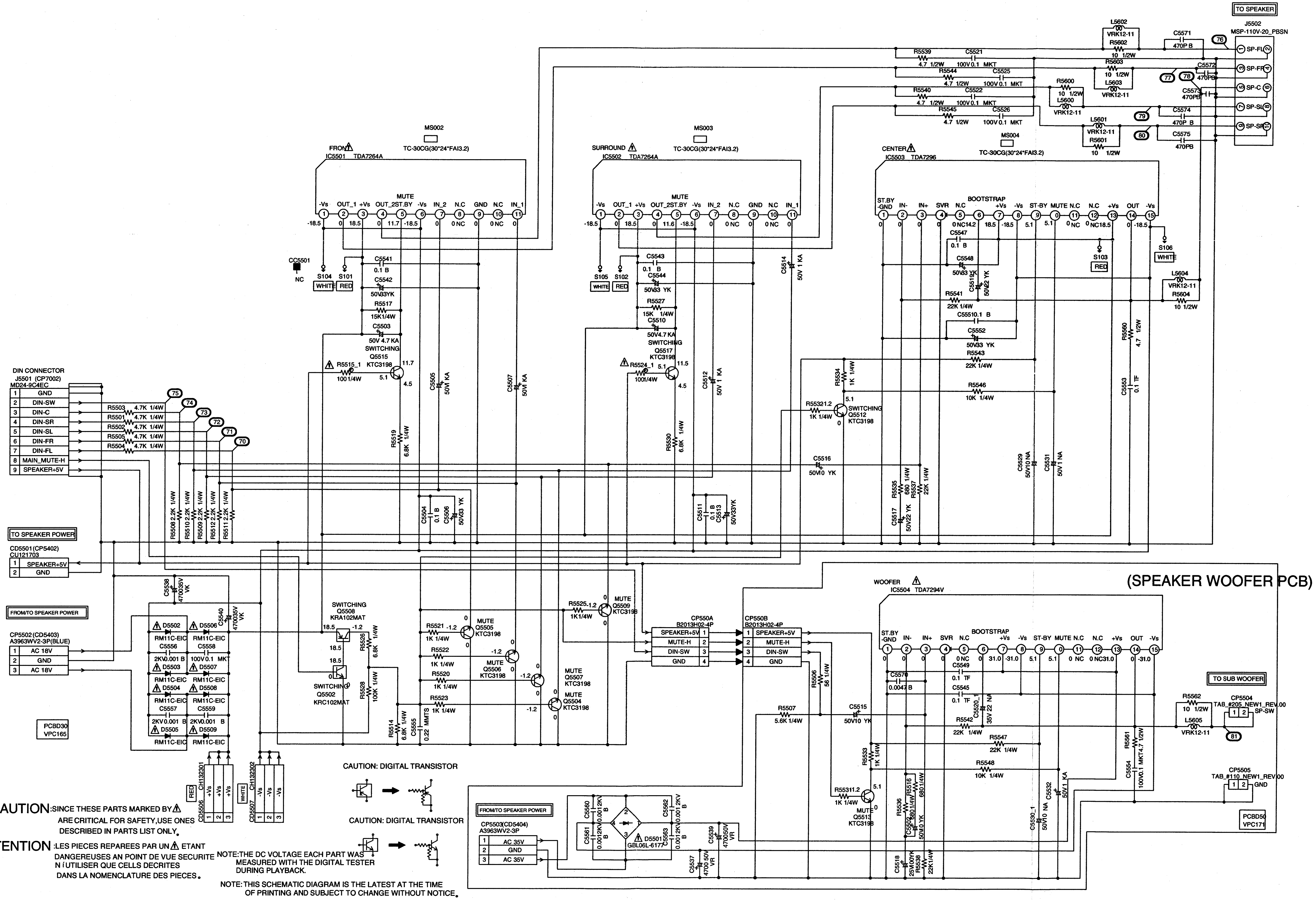

AM/FM
SW604
EVQ11L05R
R603
39K1/4W
OPEN/CLOSE
SW602
EVQ11L05R
PRESET-
SW605
EVQ11L05R
R611
20K 1/4W
R604
13K 1/4W
PLAY
SW606
EVQ11L05R
ROTARY VOL.
SW601
EVE_LE1_F20_24B
①②③
R601
8.2K 1/4W
R605
6.8K 1/4W
DVD/VCR
SW603
EVQ11L05R
PRESET+
SW607
EVQ11L05R
R602
1.5K 1/4W
R606
6.8K 1/4W
STOP
SW608
EVQ11L05R
R607
3.3K 1/4W
VCR LED
D601
R608
330 1/4W
LTL-1CHGE-002A
DVD LED
D602
R609
330 1/4W
LTL-1CHGE-002A
FROM/TO OPERATION/DISPLAY
CP601(CP651)
IMSA-9615S-08C-PP
VCR LED 8
DVD LED 7
KEY-B 6
KEY-A 5
AT+5.2V 4
VOLUME-B 3
VOLUME-A 2
GND 1
CD651
2F081008
FFC

NOTE:THE DC VOLTAGE EACH PART WAS
MEASURED WITH THE DIGITAL TESTER
DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (SPEAKER AMP)

Show page 115 - 119 the waveform of ○ mark position.


TO SPEAKER
J5502
MSP-110V-20_PBSN
SP-FL
SP-FR
SP-C
SP-SL
SP-SR
FRONT
IC5501 TDA7264A
MS002
TC-30CG(30*24*FAI3.2)
SURROUND
IC5502 TDA7264A
MS003
CENTER
IC5503 TDA7296
MS004
MUTE
BOOTSTRAP
-Vs OUT_1 +Vs OUT_2 ST.BY -Vs IN_2 N.C GND N.C IN_1
ST.BY -GND IN- IN+ SVR N.C +Vs -Vs ST-BY MUTE N.C N.C +Vs OUT -Vs
S104 WHITE
S101 RED
S105 WHITE
S102 RED
S103 RED
S106 WHITE
CC5501 NC
SWITCHING Q5515 KTC3198
SWITCHING Q5517 KTC3198
SWITCHING Q5512 KTC3198
DIN CONNECTOR
J5501 (CP7002)
MD24-9C4EC
1 GND
2 DIN-SW
3 DIN-C
4 DIN-SR
5 DIN-SL
6 DIN-FR
7 DIN-FL
8 MAIN_MUTE-H
9 SPEAKER+5V
TO SPEAKER POWER
CD5501(CP5402)
CU121703
1 SPEAKER+5V
2 GND
FROM/TO SPEAKER POWER
CP5502(CD5403)
A3963WV2-3P(BLUE)
1 AC 18V
2 GND
3 AC 18V
PCBD30
VPC165
SWITCHING Q5508 KRA102MAT
SWITCHING Q5502 KRC102MAT
MUTE Q5505 KTC3198
MUTE Q5506 KTC3198
MUTE Q5507 KTC3198
MUTE Q5504 KTC3198
MUTE Q5509 KTC3198
CP550A B2013H02-4P
CP550B B2013H02-4P
1 SPEAKER+5V
2 MUTE-H
3 DIN-SW
4 GND
(SPEAKER WOOFER PCB)
WOOFER
IC5504 TDA7294V
TO SUB WOOFER
CP5504 TAB_#205_NEW1_REV.00
SP-SW
CP5505 TAB_#110_NEW1_REV.00
GND
PCBD50
VPC171
FROM/TO SPEAKER POWER
CP5503(CD5404)
A3963WV2-3P
1 AC 35V
2 GND
3 AC 35V
D5501 GBL06L-6177
MUTE Q5513 KTC3198
CH132301
CH132302
CD5506
CD5507
CAUTION: DIGITAL TRANSISTOR
CAUTION: DIGITAL TRANSISTOR

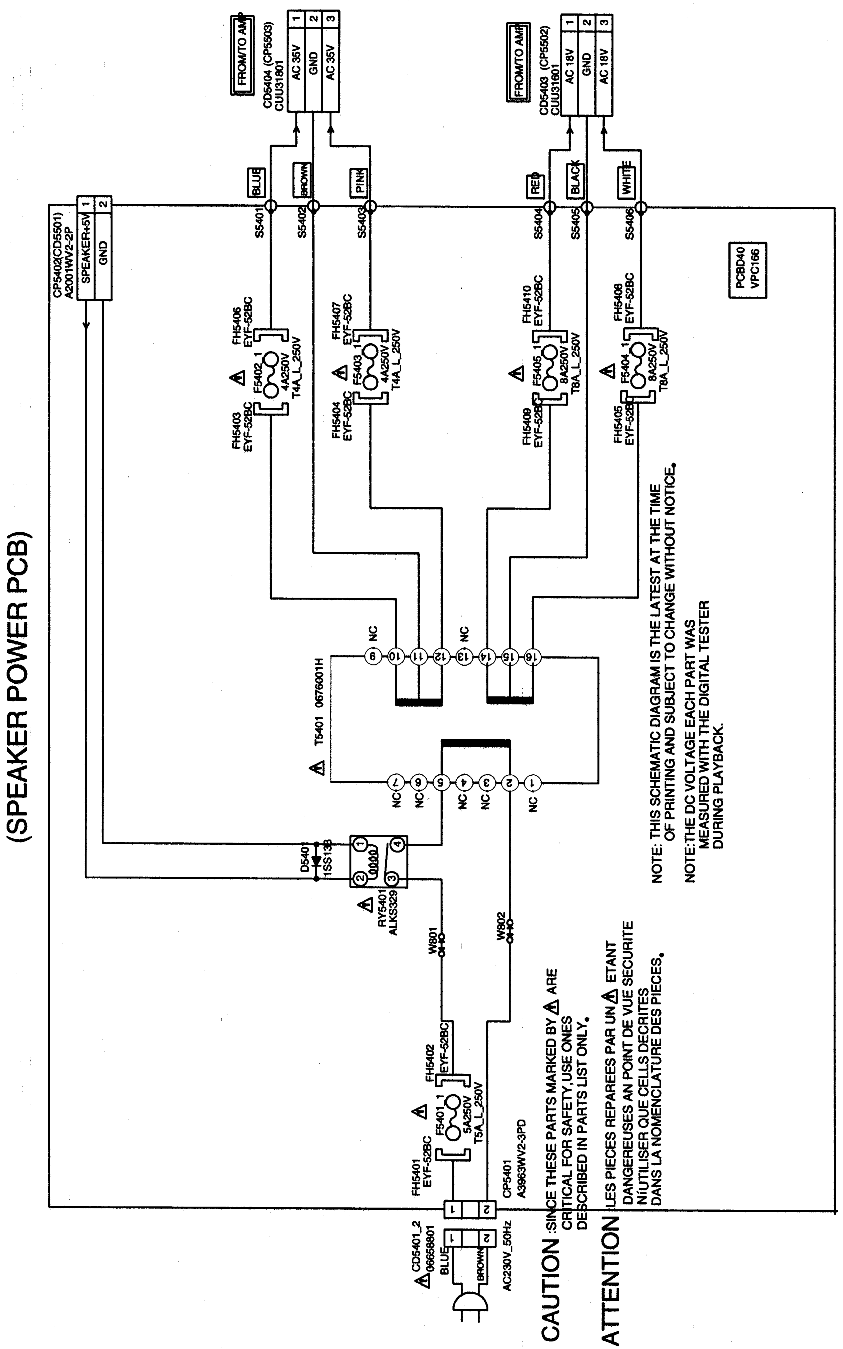
CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION : LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

SCHEMATIC DIAGRAM AND CHECK POINT FOR WAVEFORM (SPEAKER POWER)


(SPEAKER POWER PCB)
FROM/TO AMP
CD5404 (CP5503) CUU31801
1 AC 35V
2 GND
3 AC 35V
FROM/TO AMP
CD5403 (CP5502) CUU31601
1 AC 18V
2 GND
3 AC 18V
BLUE
BROWN
PINK
RED
BLACK
WHITE
S5401
S5402
S5403
S5404
S5405
S5406
CP5402(CD5501) A2001WV2-2P
1 SPEAKER+5V
2 GND
PCBD40 VPC186
FH5406 EYF-52BC
F5402_1 4A250V T4A_L_250V
FH5403 EYF-52BC
FH5407 EYF-52BC
F5403_1 4A250V T4A_L_250V
FH5404 EYF-52BC
FH5410 EYF-52BC
F5405_1 8A250V T8A_L_250V
FH5409 EYF-52BC
FH5408 EYF-52BC
F5404_1 8A250V T8A_L_250V
FH5405 EYF-52BC
T5401 0676001H
NC
D540 1SS133
RY5401 ALKS329
W801
W802
FH5402 EYF-52BC
F5401_1 5A250V T5A_L_250V
FH5401 EYF-52BC
CP5401 A3863WV2-3PD
CD5401_2 06658801
BLUE
BROWN
AC230V_50Hz

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

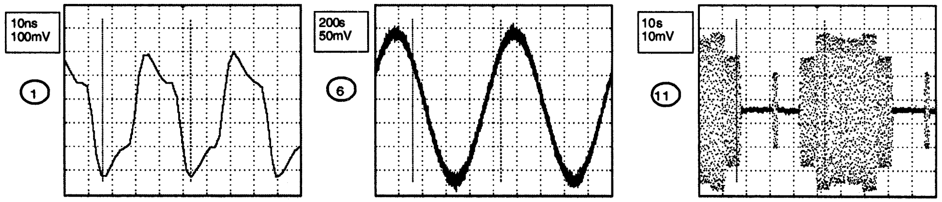
NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

CAUTION :SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

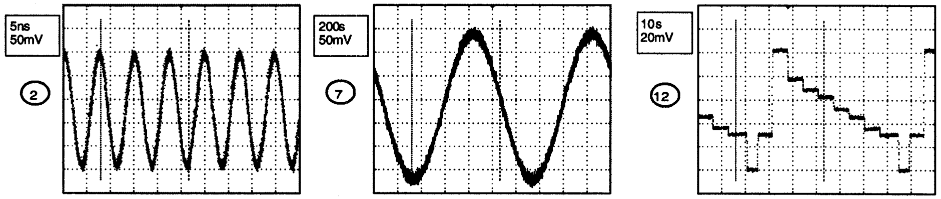
ATTENTION :LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

WAVEFORM OF CHECK POINT

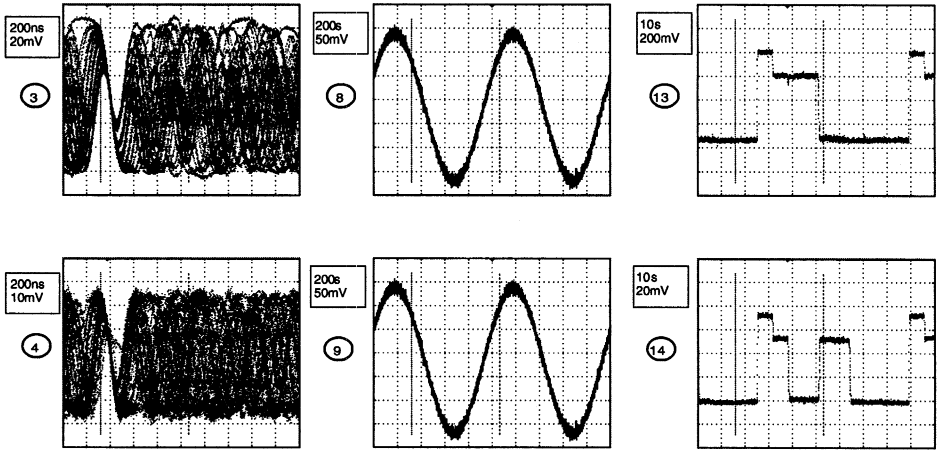
MPEG/MICON



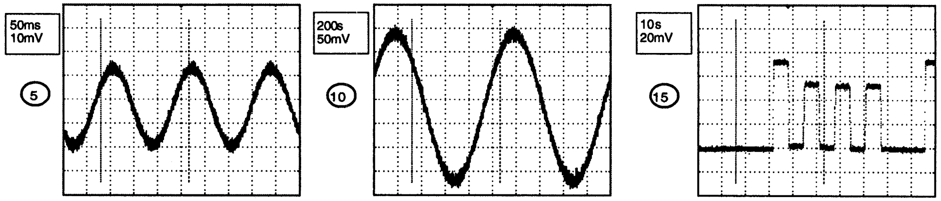
MEMORY



RF_AMP/DSP

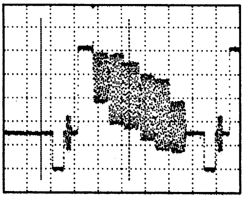


AUDION/VIDEO



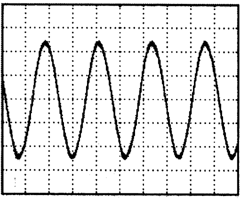
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORM OF CHECK POINT



⑯

Y/C/AUDIO/HEAD AMP



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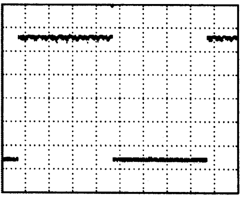

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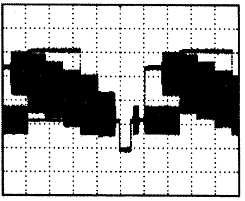

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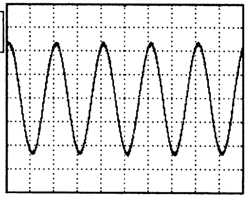

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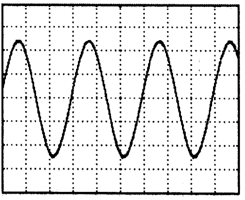

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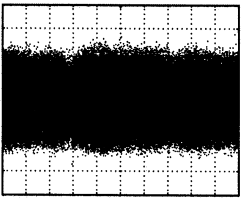

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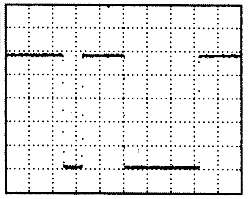
SYSCON



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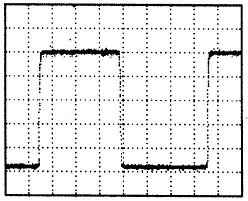

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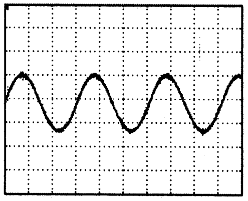

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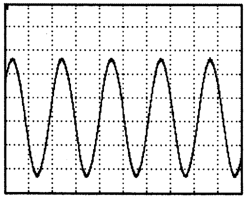

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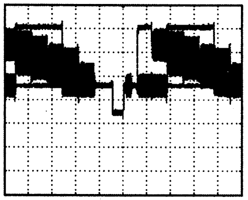

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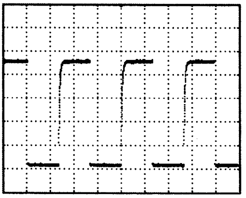

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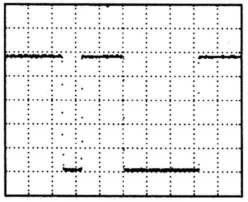

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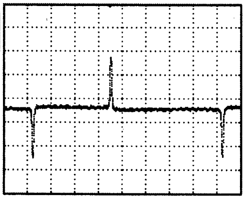
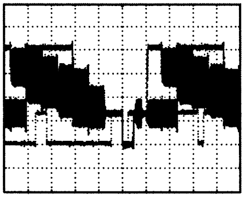


㉝

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORM OF CHECK POINT

21PIN/TUNER



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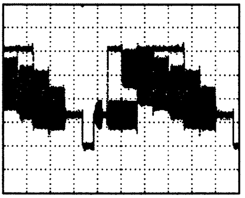

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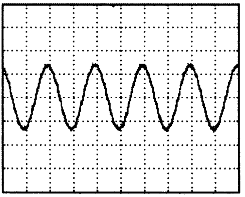

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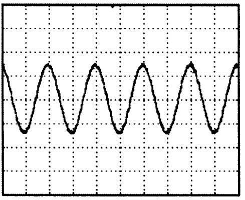
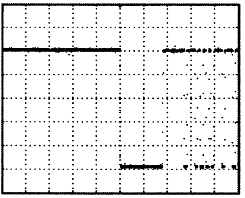


㊳

OPERATION/DISPLAY



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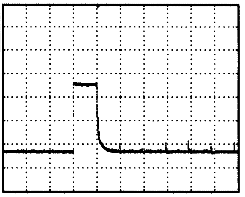

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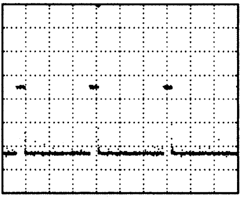
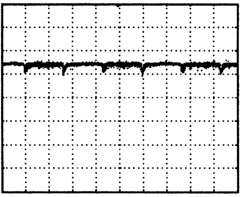


㊶

Hi-Fi/DEMODURATER



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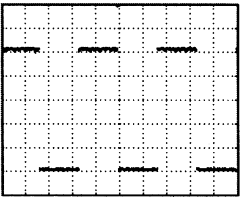

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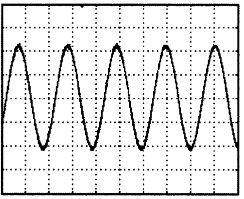

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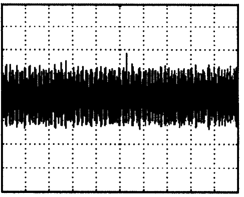

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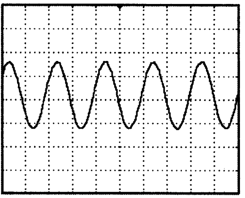
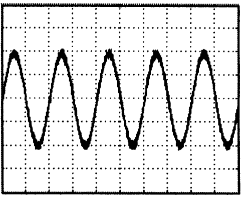


㊻

Q-SURROUND



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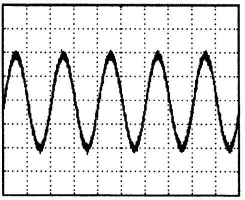

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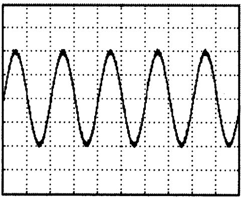
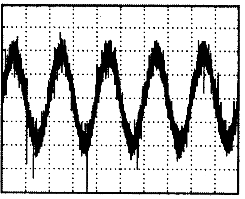


㊾

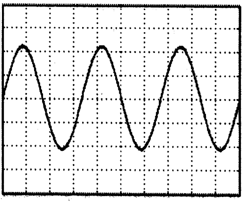
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORM OF CHECK POINT

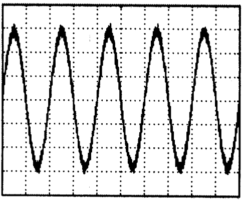


㊿

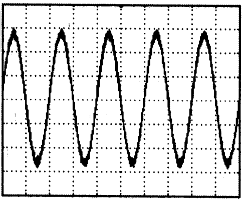
6CH VOLUME



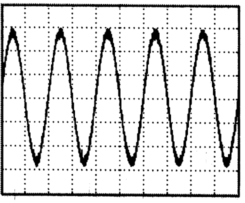
(51)



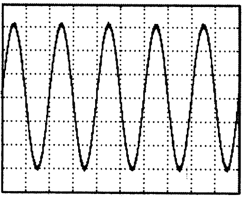
(52)



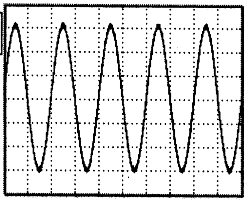
(53)



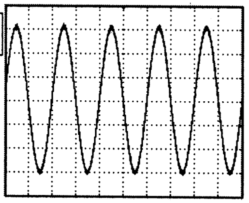
(54)



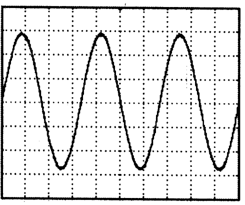
(55)



(56)

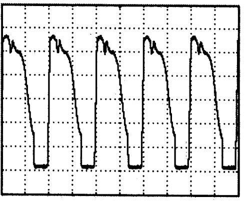


(57)

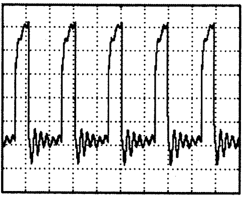


(58)

POWER

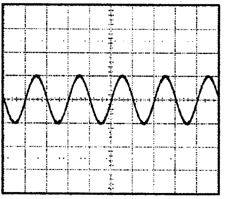


(65)

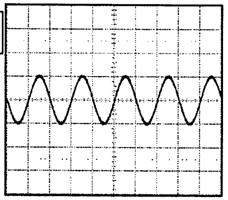


(66)

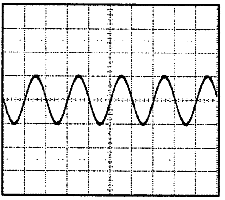
AMP



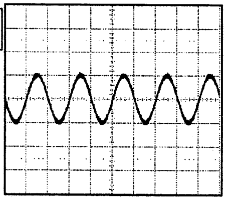
(70)



(71)



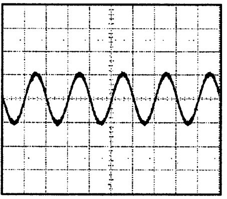
(72)



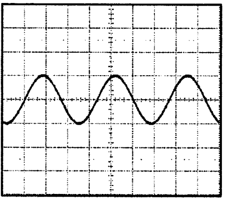
(73)

The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

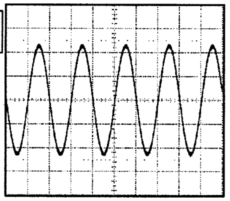
WAVEFORM OF CHECK POINT



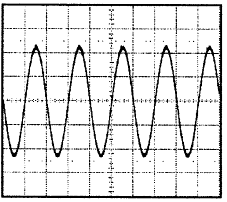
(74)



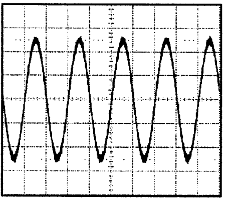
(75)



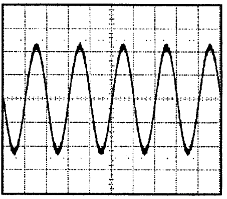
(76)



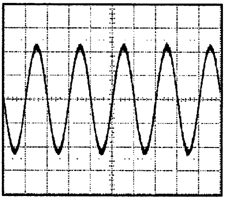
(77)



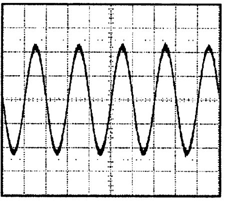
(78)



(79)



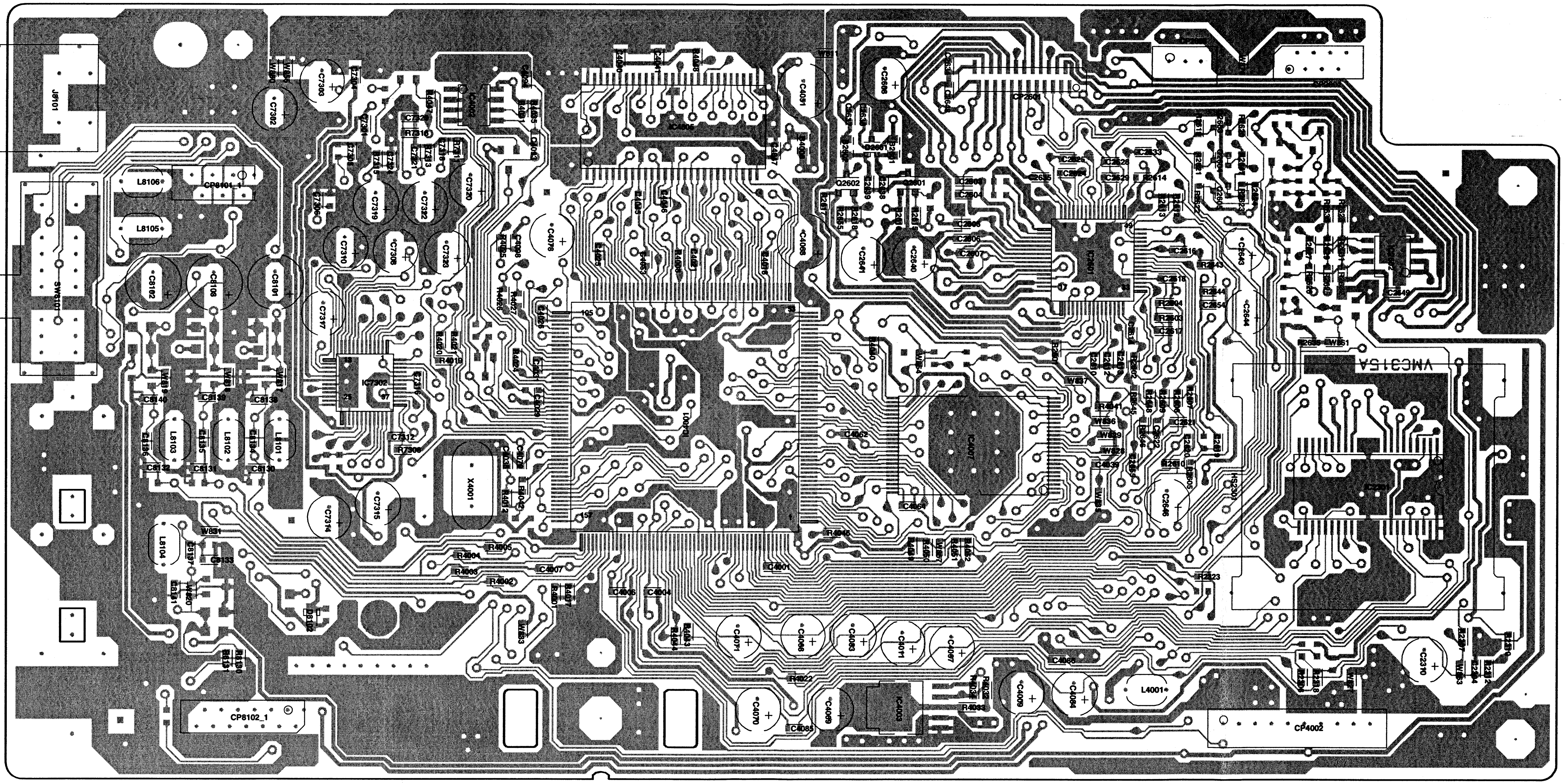
(80)



(81)

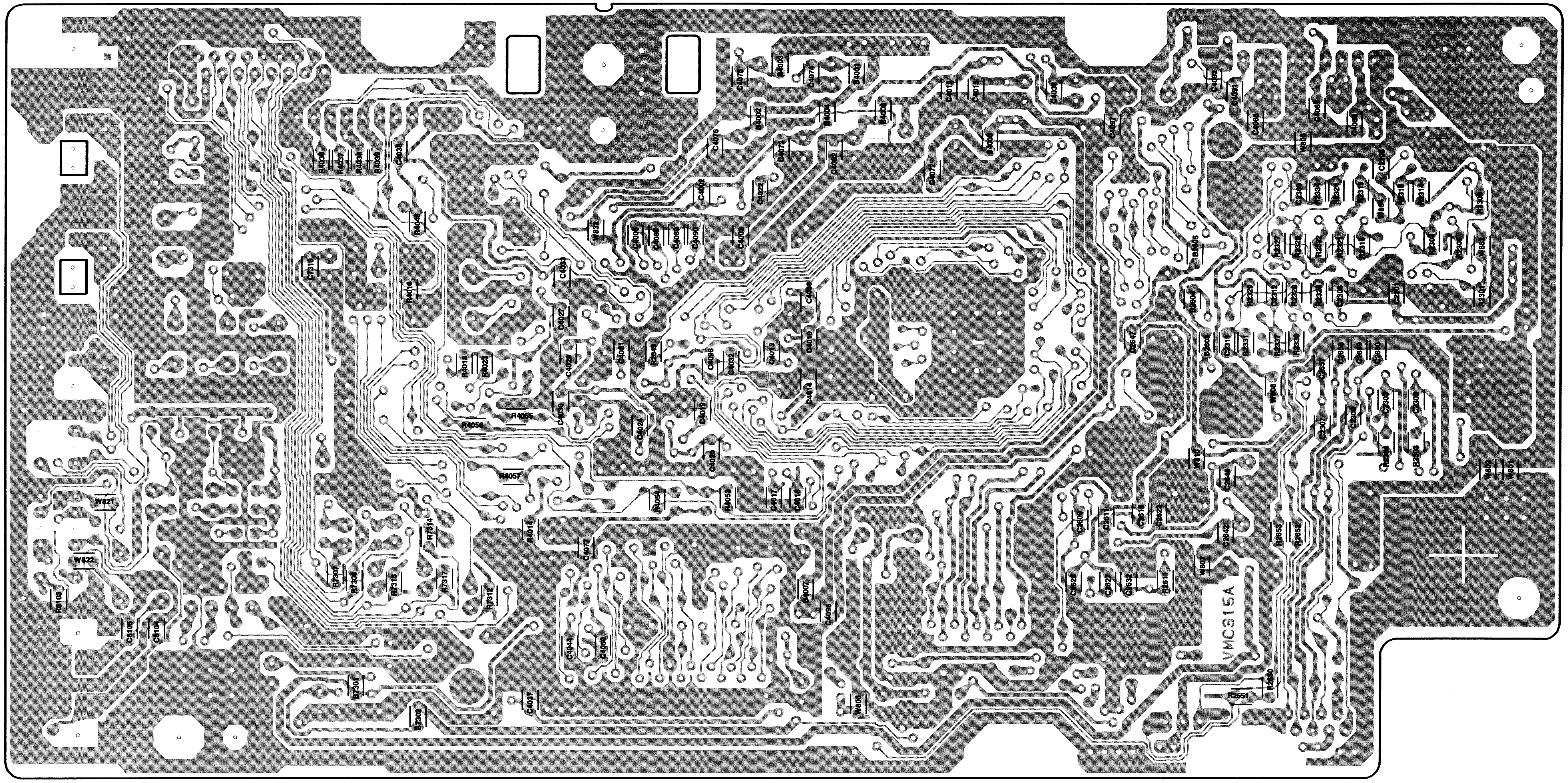
The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WIRING DIAGRAM (DVD A Side)

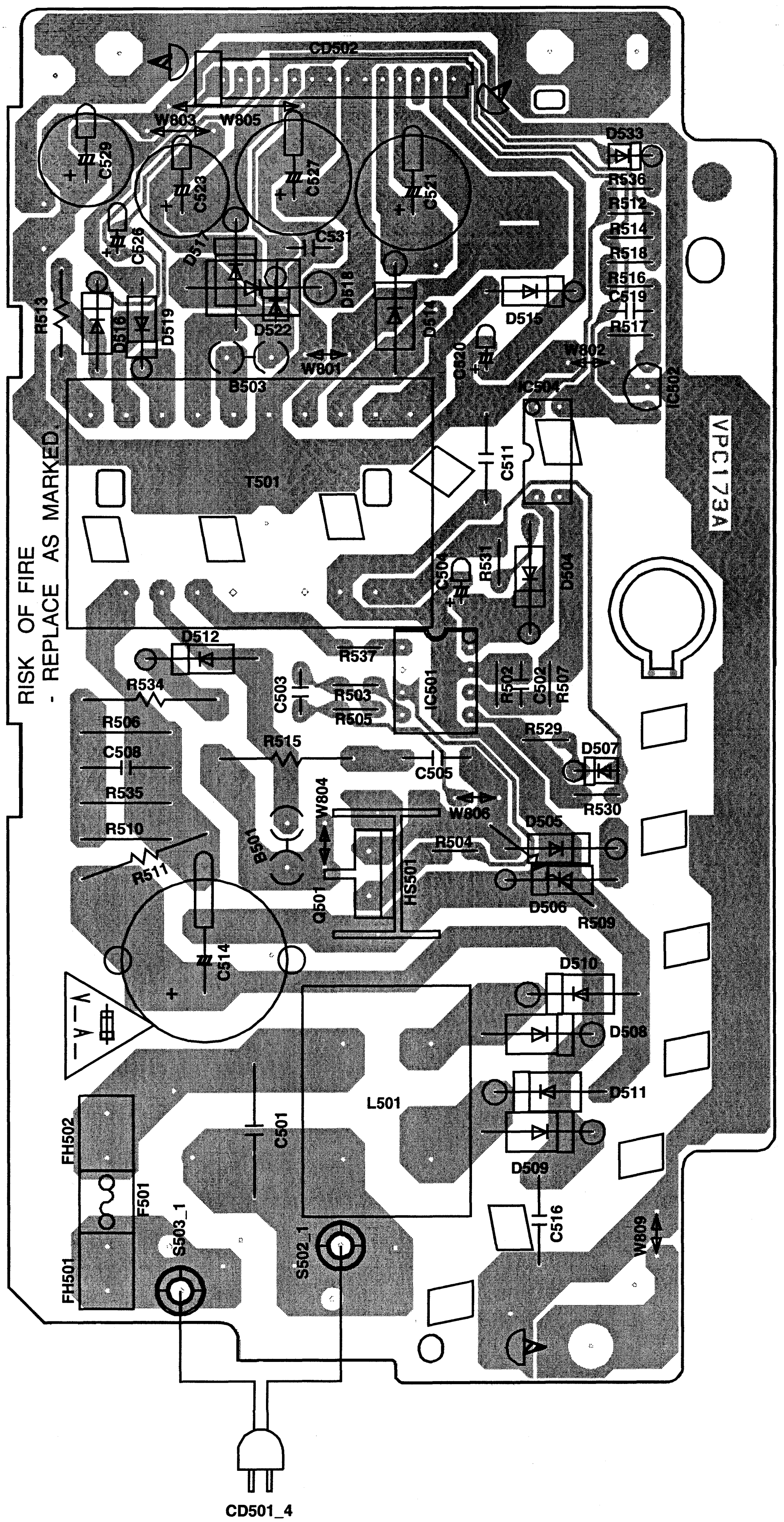


J8101
SW8101
L8106
L8105
CP8101_1
C8102
C8108
C8101
L8103
L8102
L8101
L8104
CP8102_1
IC7302
X4001
IC4001
IC4003
IC2601
IC2301
CP2601
CP4002
L4001
VMC315A
C2310
C4070
C4009
C4094
Q2602
Q2601

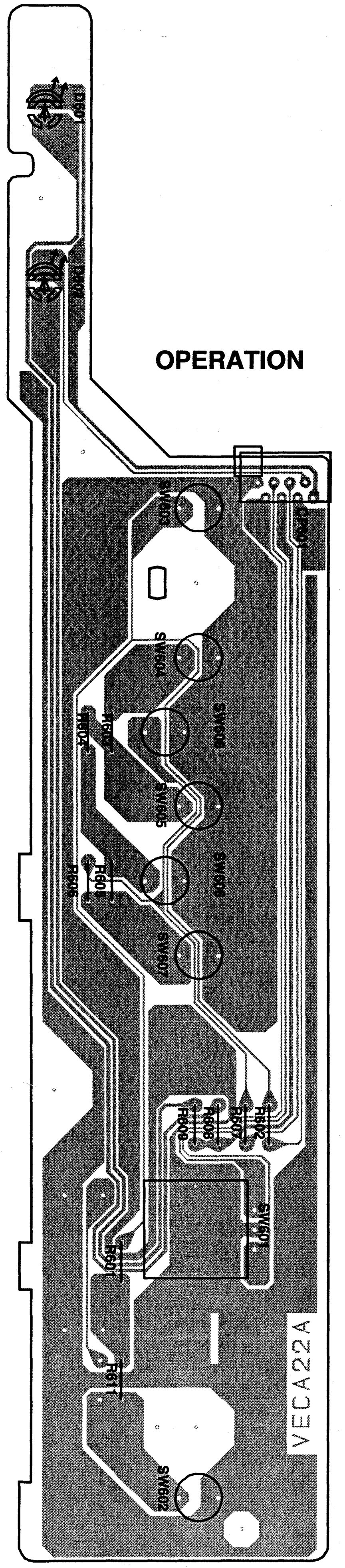
WIRING DIAGRAM (DVD B Side)

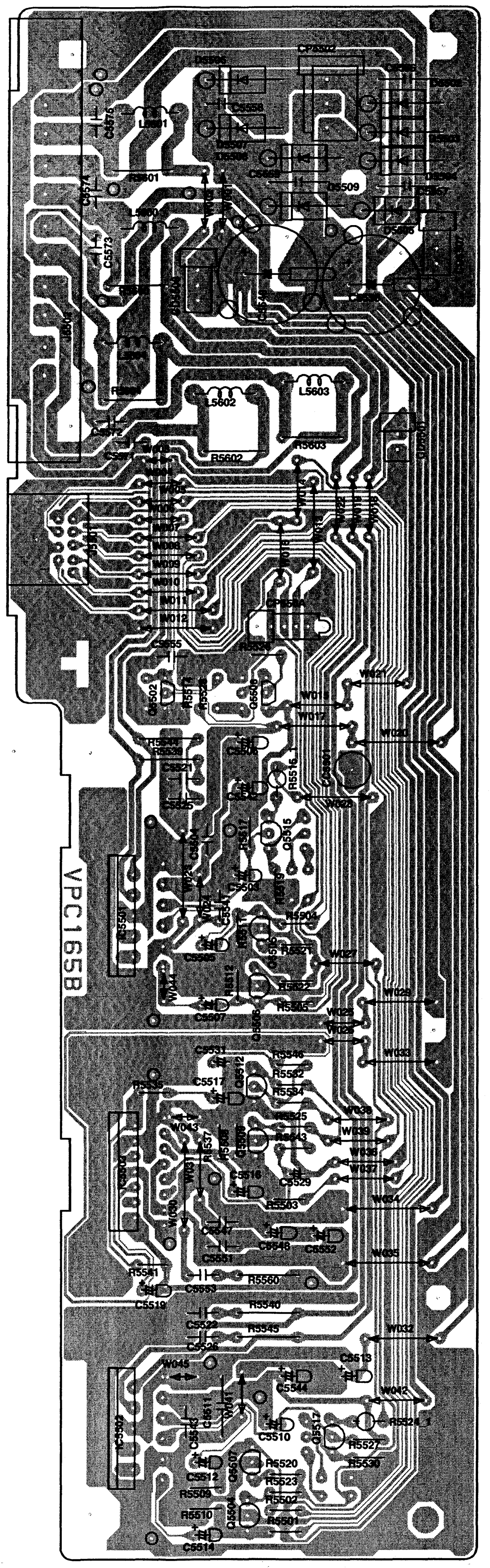

VMC315A
W821
W822
R4055
R4056
R4057
R2651

WIRING DIAGRAM (POWER)

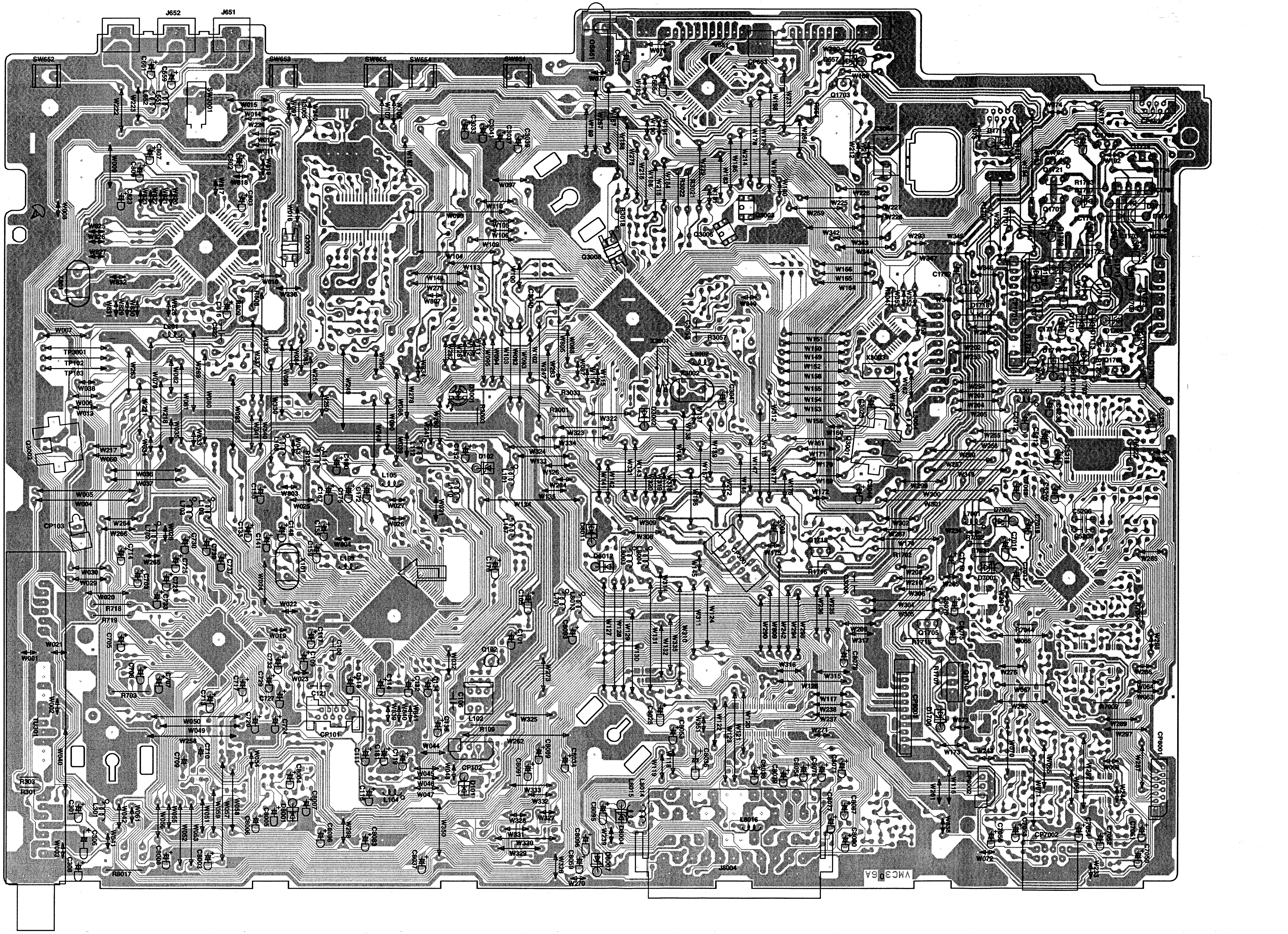

CD502
W803
W805
C529
C523
C527
C531
C526
D517
C531
D518
D514
D533
R536
R512
R514
R518
R516
C519
R517
D515
R513
D516
D519
D522
W801
B503
Q520
W802
IC504
C502
VPC173A
RISK OF FIRE
- REPLACE AS MARKED
T501
C511
C504
R531
D504
D512
R537
R534
C503
R503
R505
IC501
R502
C502
R507
R506
C508
R535
R510
R511
R515
R529
D507
C505
R530
W804
W806
D505
B501
R504
Q501
HS501
D506
R509
C514
D510
D508
L501
C501
D511
D509
FH502
F501
FH501
S503_1
S502_1
C516
W809
CD501_4

WIRING DIAGRAM (OPERATION and SPEAKER MAIN)

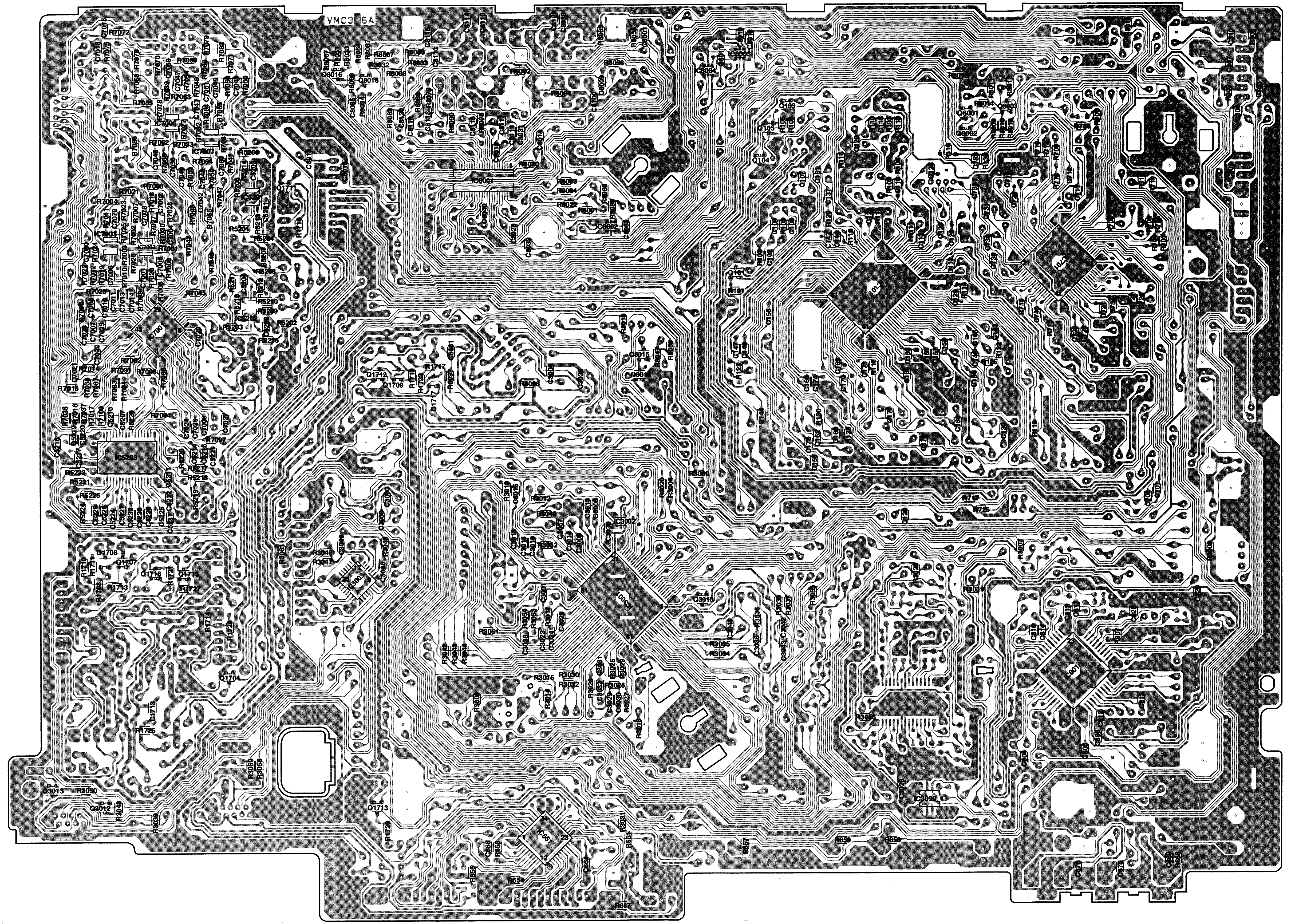

OPERATION
D601
D602
CP601
SW603
SW604
SW608
SW605
SW606
SW607
R602
R603
R604
R601
R605
R606
R607
R608
SW601
R609
R611
SW602
VECA22A


SPEAKER MAIN
C5602
L5601
L5602
L5603
R5602
R5603
D5509
W010
W011
W012
VPC165B
R5504
C5505
C5507
C5517
R5552
R5554
C5516
C5529
R5563
C5552
C5531
R5541
C5553
R5560
C5519
R5540
R5545
C5513
C5544
C5510
R5527
R5530
C5512
R5520
R5523
R5505
R5502
R5510
R5501
C5514
W032
W035
W042

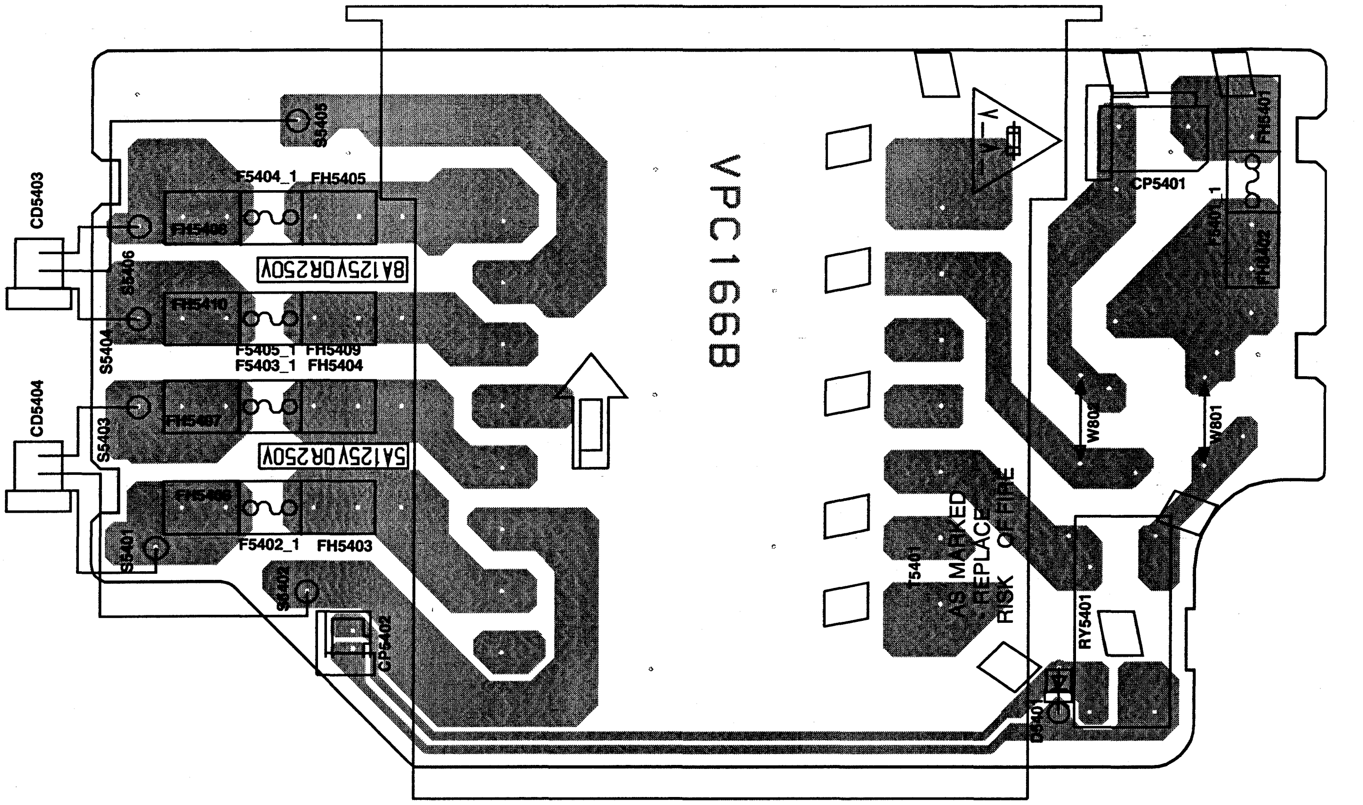
WIRING DIAGRAM (VCR A Side)


J652
J651
SW652
SW653
SW655
SW654
SW651
CP103
CP101
CP102
J8004
CP8001
CP7002
VMC30 6A

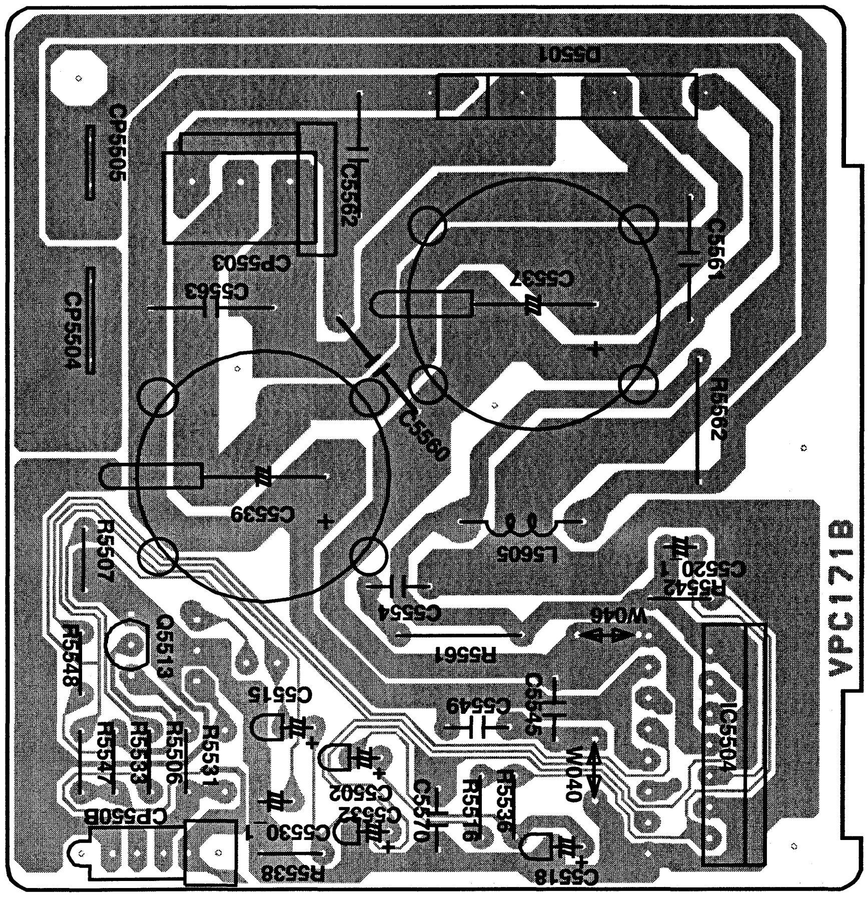
WIRING DIAGRAM (VCR B Side)


VMC3 6A
IC7000
IC5203
IC8001
IC3001
IC3003
IC601
IC651
IC101
IC3050
Q1704
Q1708
Q1707
Q1712
Q1709
Q3013
Q3012
Q1713

WIRING DIAGRAM (SPEAKER WOOFER and SPEAKER POWER)


VPC166B
S5405
F5404_1
FH5405
FH5406
CD5403
8A125VDR250V
S5406
FH5410
F5405_1
FH5409
F5403_1
FH5404
S5404
CD5404
S5403
FH5407
5A125VDR250V
FH5408
F5402_1
FH5403
S5401
S5402
CP5402
T5401
AS MARKED
REPLACE
RISK OF FIRE
RY5401
D5401
W802
W801
CP5401
FH5401
F5401_1
FH5402

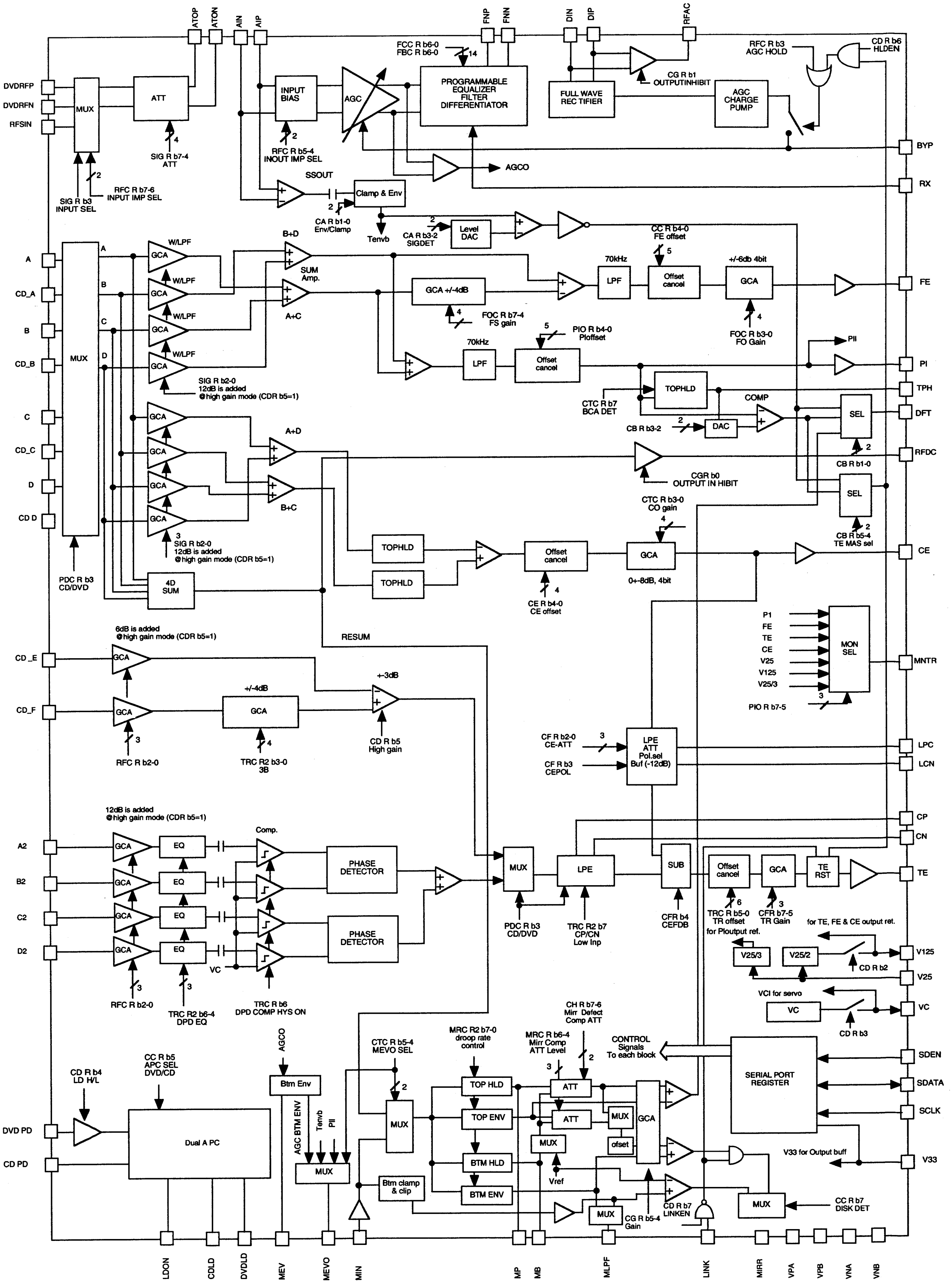
SPEAKER POWER


VPC171B
D5501
CP5505
C5562
CP5503
C5563
C5561
C5537
CP5504
R5562
C5560
C5539
L5605
R5507
C5520_1
R5542
W046
C5554
R5561
Q5513
R5548
C5515
C5549
C5545
IC5504
R5547
R5533
R5506
R5531
W040
C5502
C5532
C5570
R5516
R5536
CP5508
C5530_1
R5538
C5518

SPEAKER WOOFER

IC BLOCK DIAGRAM & DESCRIPTION

IC2601 ZR3670TQC(READ CHANNEL)


ATOP
ATON
AIN
AIP
FNP
FNN
DIN
DIP
RFAC
DVDRFP
DVDRFN
RFSIN
MUX
ATT
SIG R b7-4 ATT
SIG R b3 INPUT SEL
RFC R b7-6 INPUT IMP SEL
INPUT BIAS
RFC R b5-4 INOUT IMP SEL
AGC
FCC R b6-0
FBC R b6-0
PROGRAMMABLE EQUALIZER FILTER DIFFERENTIATOR
FULL WAVE REC TIFIER
CG R b1 OUTPUTINHIBIT
AGC CHARGE PUMP
RFC R b3 AGC HOLD
CD R b6 HLDEN
BYP
AGCO
RX
SSOUT
Clamp & Env
CA R b1-0 Env/Clamp
Tenvb
CA R b3-2 SIGDET
Level DAC
CC R b4-0 FE offset
70kHz
LPF
Offset cancel
+/-6db 4bit
GCA
FE
W/LPF
B+D
SUM Amp.
A+C
GCA +/-4dB
FOC R b7-4 FS gain
PIO R b4-0 Ploffset
FOC R b3-0 FO Gain
PII
PI
A
CD_A
B
CD_B
C
CD_C
D
CD D
SIG R b2-0 12dB is added @high gain mode (CDR b5=1)
TOPHLD
TPH
CTC R b7 BCA DET
COMP
CB R b3-2
DAC
SEL
DFT
A+D
B+C
CB R b1-0
RFDC
CGR b0 OUTPUT IN HIBIT
CTC R b3-0 CO gain
CB R b5-4 TE MAS sel
CE
PDC R b3 CD/DVD
4D SUM
CE R b4-0 CE offset
0+-8dB, 4bit
RESUM
6dB is added @high gain mode (CDR b5=1)
CD _E
CD_F
+-3dB
+/-4dB
RFC R b2-0
TRC R2 b3-0 3B
CD R b5 High gain
P1
TE
V25
V125
V25/3
MON SEL
MNTR
PIO R b7-5
CF R b2-0 CE-ATT
CF R b3 CEPOL
LPE ATT Pol.sel Buf (-12dB)
LPC
LCN
12dB is added @high gain mode (CDR b5=1)
Comp.
A2
B2
C2
D2
EQ
PHASE DETECTOR
VC
RFC R b2-0
TRC R2 b6-4 DPD EQ
TRC R b6 DPD COMP HYS ON
MUX
LPE
PDC R b3 CD/DVD
TRC R2 b7 CP/CN Low Inp
SUB
CFR b4 CEFDB
CP
CN
TE RST
TRC R b5-0 TR offset for Ploutput ref.
CFR b7-5 TR Gain
for TE, FE & CE output ref.
V25/3
V25/2
CD R b2
V125
V25
VCI for servo
CD R b3
CH R b7-6 Mirr Defect Comp ATT
MRC R2 b7-0 droop rate control
MRC R b6-4 Mirr Comp ATT Level
CTC R b5-4 MEVO SEL
CONTROL Signals To each block
SERIAL PORT REGISTER
SDEN
SDATA
SCLK
CC R b5 APC SEL DVD/CD
CD R b4 LD H/L
AGCO
Btm Env
AGC BTM ENV
Tenvb
PII
TOP HLD
TOP ENV
BTM HLD
BTM ENV
Btm clamp & clip
ATT
ofset
Vref
V33 for Output buff
V33
CD R b7 LINKEN
CG R b5-4 Gain
CC R b7 DISK DET
DVD PD
CD PD
Dual A PC
LDON
CDLD
DVDLD
MEV
MEVO
MIN
MP
MB
MLPF
LINK
MIRR
VPA
VPB
VNA
VNB

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
F5404	⚠ 645 064 4818	FUSE 50,UL/SEMCO/VDE 1
F5405	⚠ 645 064 4818	FUSE 50,UL/SEMCO/VDE 1
FH5401	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5402	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5403	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5404	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5405	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5406	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5407	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5408	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5409	645 051 4432	HOLDER,FUSE,TAPING 0.60
FH5410	645 051 4432	HOLDER,FUSE,TAPING 0.60
RY5401	⚠ 645 064 4542	RELAY ALKS329 RY540, VAC UL CSA 12
T5401	⚠ 645 064 4504	TRANSFORMER,POWER AC,001H, AC230V 50HZ 2500

SPEAKER WOOFER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
PCBD50	614 328 6448	ASSY,PWB,SPK,WOO,TS3000XE (Only initial)
C5520	645 064 3927	CE 35NA22MT1 22, A TYPE TAPING 2.5MM 11
C5530	645 055 4100	CE 50NA10MT1 10 UF 50V, A TYPE TAPING 2.5MM 5
C5537	645 062 6418	CE 4700 UF 50V,50V, VR SERIES 2 40 8
C5539	645 062 6418	CE 4700 UF 50V,50V, VR SERIES 2 40 8
C5545	645 062 6524	CMPL 0.1 UF 50V TF,50V TF, TAPING 10. 8.
C5549	645 062 6524	CMPL 0.1 UF 50V TF,50V TF, TAPING 10. 8.
C5554	645 062 6517	CMP 0.1 UF 100V MKT,100V MKT
C5570	645 064 3873	CC RTHE80TKYB472K 0., 50V B,YB 8. 3.0 TAP
CP5503	645 062 6661	CONNECTOR PCB SIDE 3, V2-3P,PITCH=3.96 3PIN 0
CP5504	645 062 6739	LUG PIN TAB 205 NEW,+ SIDE 0.23
CP5505	645 062 6746	LUG PIN TAB 110 NEW,- SIDE 0.14
CP550B	645 062 6647	WIRE HOLDER B2013H02, 4PIN 2.0MMPITCH 1.5
D5501	⚠ 645 061 0660	DIODE GBL06L-6177, BRIDGE VRM=600V I=2.2A 2
IC5504	⚠ 645 062 6449	IC TDA7294V,OS AUDIO AMP 5.7
L5605	645 062 6579	COIL VRK12-11
Q1707	645 055 4568	TR KTC3875S,5S_Y_RTK, CHIP SMT TYPE